



# ARTIFICIAL INTELLIGENCE FROM FINLAND

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FINLAND



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# AI STRATEGY DRIVES INNOVATION

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FINLAND AIMS TO BE THE LEADING COUNTRY IN APPLYING ARTIFICIAL INTELLIGENCE. AS A TECHNOLOGY SUPERPOWER, WE ARE ABLE TO FULLY UTILIZE ALL THE POSSIBILITIES OF AI THROUGHOUT THE SOCIETY.





# NATIONAL AI STRATEGY

In 2017, Finland initiated one of the world's first **national AI strategies and action plans to boost AI application**. The public sector is already integrating AI into its operations to increase efficiency and improve services.

By successfully applying AI, Finland has the potential to **double its economic growth rate** by 2035.\*

Finland offers **top-level AI education** at its universities and is raising the awareness of its citizens through public online courses, such as Elements of AI.

The Finns form **a tech-savvy society** that is not afraid of new technologies and innovations. This makes the country an excellent place for developing and applying novel AI technologies.



# AI HELPING CITIZENS

The **AuroraAI** is a program governed by the Ministry of Finance that aims to **organize services around people's life and business events**.

The AuroraAI network **connects smart services and applications** provided by public, private and third sectors and delivers support and services for citizens exactly when they need them in different life events.

The Finnish National Broadcasting Company (YLE) launched a campaign in 2020 to collect spoken Finnish from all around the country in order to **teach algorithms to understand and recognize different Finnish dialects**. Over 4,000 hours of speech have been collected already through a mobile application, which enables Finnish to be used in digital services with speech recognition in the future.





# STARTUPS DRIVING INNOVATION

Finland has a long tradition in AI research, which has led to **cutting-edge expertise**.

Large Finnish companies have built their own AI development units, but the driving force is the hundreds of innovative startups with their **roots in universities and research**.

These innovators are **successfully applying AI** in various business verticals, most commonly in healthcare, manufacturing, business tools and services.

The startup scene has attracted many international companies to **establish their AI development units in Finland**. These companies include global giants such as Amazon and NVIDIA.

Additionally, the Finnish capital region is listed as the world's 20th best emerging startup ecosystem.\*





# TRANSFERRING AI KNOWLEDGE

Finland ranks **third in AI use by enterprises** in the EU.\*

The Finnish Center for Artificial Intelligence (FCAI) and regional AI hubs drive AI commercialization by **effectively transferring knowledge** and findings to startups and established businesses.

Business Finland, the government organization for innovation funding, investment, trade and travel promotion, accelerates **R&D collaboration** by funding joint projects of private companies, universities, research institutes and public organizations.

Finland's **wide offering of data pools** is available for businesses, for instance, in healthcare, to speed up AI development and adoption.



\*Eurostat 2021

# CATALYZING AI ECOSYSTEMS

AI GROWTH ECOSYSTEMS SUPPORTED BY  
AN ENTERPRISE-DRIVEN PARTNERSHIP  
MODEL STRIVE TO FIND SOLUTIONS TO  
GLOBAL MARKET DISRUPTIONS.

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# GROWTH ENGINES

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## **AWAKE.AI: AUTONOMOUS PORTS**

Awake.AI is a collaborative and open data platform company that facilitates ecosystem creation for smart ports and evolving autonomous shipping. The underlying objective of the Awake.AI platform is to increase operational efficiencies and create new digital services for all actors in the port ecosystem.

## **ICEYE: INTERNET OF LOCATIONS**

ICEYE successfully launched its second SAR satellite, ICEYE-X2, in December 2020. The satellite launch is an initial step to create the necessary ICEYE SAR satellite constellation for frequent and reliable satellite-based information about any location on Earth. ICEYE established the Internet of Locations to support vast economic growth in Finland in the various phases of generating, analyzing and consuming satellite data for operational uses.

## **SILO.AI: EUROPEAN AI FLAGSHIP**

Silo.AI aims to build an ecosystem around its platform to bring together AI experts and technology partners and become the European flagship for AI. The main goals of the ecosystem are to generate new business for operators through AI-driven solutions and processes and to commercialize Finnish top expertise, particularly in global markets.

## **UNIKIE: PLATFORM FOR AUTONOMOUS VEHICLES ECOSYSTEM FINLAND (PAVEF)**

The primary objective for PAVEF is to advance the joint development of intelligent machinery and automotive technology and to maximize the international competitiveness of Finnish manufacturing in these areas. The purpose is to enable large-scale technological research, development and delivery of autonomous vehicles for international customers.



# AI-INTENSIVE ECOSYSTEMS

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## CLEVERHEALTH NETWORK

CleverHealth Network is a health technology ecosystem in which companies and healthcare experts develop better treatment solutions for Finns and successful export products for companies. Product and service innovations are based on Helsinki University Hospital's extensive health data and the leading expertise of clinicians.

## ONE SEA

One Sea is a high-profile ecosystem with the primary aim of leading the way toward an operating autonomous maritime ecosystem by 2025. The collaboration gathers together leading marine experts and is a strategic combination of top research, state-of-the-art information technology and business.

## INTELLIGENT INDUSTRY

Intelligent Industry is an innovative ecosystem focusing on value co-creation and connecting leading Finnish equipment manufacturers and digital solutions providers to drive and realize the immense opportunities in the industrial data economy and digital transformation.

## SMART OTANIEMI

Smart Otaniemi is an innovation environment for smart and sustainable urban solutions that connect startups, SMEs, large enterprises, research institutes, universities and public sector agencies across the globe to collaborate on world-changing ideas and innovations.



# TOP AI RESEARCH AND EDUCATION

FINLAND RANKS HIGH IN DIGITAL  
SKILLS. OUR STRENGTH LIES IN OUR  
TOP UNIVERSITIES AND ACCESSIBLE  
LEARNING OPPORTUNITIES.

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# LONG-TERM INTEREST IN NEURAL NETWORKS

Finnish AI pioneer Teuvo Kohonen introduced his Self-Organizing Maps in the 80s, which led the way for larger research in **neural networks and pattern recognition** in Finland.

Nowadays, **high-level research and education in machine learning and AI** is conducted in several universities across the country, as well as at the VTT Technical Research Centre of Finland.





# TOP-LEVEL UNIVERSITY EDUCATION

Finland is ranked **#1 in data science and machine learning** proficiency globally.\*

In a country of 5.5 million people, major universities offer **more than 250 individual AI courses**, 40 master-level programs, 19 bachelor-level programs and 3 doctoral programs. The universities of applied sciences provide an additional 26 study programs on the subject.

Overall, about **6,300 students** take at least one course in AI at Finnish universities every year. Several hundreds of students graduate from AI programs annually.





# ACCESSIBLE LEARNING OPPORTUNITIES

More than 1% of the total Finnish population has been trained on the basics of AI by participating in the collaborative, free online course entitled **Elements of AI**.

The course will soon be available in most EU languages and has already had participants from **over 170 countries**.

It is ranked as the **world's #1 online AI course** according to the Class Central online course search portal.

Additionally, FCAI, Aalto Executive Education and the University of Helsinki offer **diplomas in AI**.





# ACADEMY OF FINLAND FUNDS AI RESEARCH

The **Academy of Finland** has an ICT 2023 program for R&D and innovation, which aims to **strengthen knowledge and applications** in machine learning, industrial internet and user-centric digital healthcare technologies and services.

The Academy of Finland has six flagship programs, one being the **Finnish Center for Artificial Intelligence** (FCAI). FCAI comprises 60 professors and 300 researchers and has a EUR 250 million budget for the flagship term of 2019–2026. It is a community of experts from Aalto University, the University of Helsinki and VTT.





# FCAI LEADING AI RESEARCH

FCAI's research mission is to create new types of AI, which can **operate with humans in the complex world**, and to renew the Finnish industry. This new AI is more **data efficient, trustworthy and understandable**.

FCAI is one of the **European Commission's Digital Innovation Hubs** in the field of artificial intelligence (AI DIH). It brings together top talents in academia, industry and the public sector for **solving real-life problems** using both established and newly emerged AI.

Additionally, FCAI hosts the **ELLIS unit of Helsinki**. ELLIS, the European Laboratory for Learning and Intelligent Systems, is a **European AI network of excellence** focusing on fundamental science, technical innovation and societal impact. The Helsinki unit contributes to a concerted European effort in machine learning.

## FCAI RESEARCH PROGRAMS INCLUDE:

1. Agile probabilistic AI
2. Simulator-based inference
3. Next-generation data-efficient deep learning
4. Privacy-preserving and secure AI
5. Interactive AI
6. Autonomous AI
7. AI in society





# COMPUTING SUPERPOWER

**CSC – IT Center for Science** is a non-profit state-owned enterprise, owned by the Finnish state and higher education institutions.

The EuroHPC Joint Undertaking decided in 2019 to place one of the EuroHPC pre-exascale supercomputers in CSC's data center. When the supercomputer, named **LUMI**, begins its operations in fall 2021, it will be one of the **world's fastest computer systems** and one of the most advanced platforms for artificial intelligence.

Up to 20% of LUMI's capacities is reserved for industry and SMEs to use. CSC provides **free computing resources** for research projects of the Finnish SMEs through Business Finland's computing grant.





# WHY FINLAND?

A HIGH LEVEL OF EDUCATION, RESEARCH, ACTIVE COOPERATION AND A BUZZING STARTUP SCENE FORM A FRUITFUL ENVIRONMENT FOR DEVELOPING AI IN FINLAND.

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#1

IN BEST BUSINESS  
ENVIRONMENTS  
IN THE WORLD

GLOBAL INNOVATION  
INDEX 2019

#1

IN DIGITAL  
COMPETITIVENESS  
IN THE EU

DIGITAL ECONOMY AND  
SOCIETY INDEX (DESI) 2019

#1

IN AVAILABILITY OF  
LATEST  
TECHNOLOGIES

WORLD ECONOMIC FORUM  
GLOBAL COMPETITIVE INDEX  
2017-2018

#3

IN GOVERNMENT  
AI READINESS  
IN THE WORLD

OXFORD INSIGHTS & IDRC  
AI READINESS INDEX 2020

#3

IN MOST  
INNOVATIVE  
COUNTRIES  
IN THE WORLD

BLOOMBERG INNOVATION  
INDEX 2019



# WHY FINLAND?

## EXTENSIVE RESEARCH

Finland's high level of education and decades of research in machine learning and signal processing have formed a solid basis for Finnish AI know-how and development. Finland has the second largest number of AI experts per capita in Europe.\*

## ACTIVE COOPERATION

Active cooperation between companies, universities and research centers is funded by the state via Business Finland. This strategic support has created an attractive research and innovation environment.

## VIBRANT STARTUP SCENE

The Helsinki region has been recognized as one of the most important AI startup ecosystems in Europe. Finland has over 300 AI startups in total, many of which are research spinoffs.





# TECHNOLOGICAL STRENGTHS

## MACHINE LEARNING SOLUTIONS

Finnish companies have the capability to apply the latest machine learning solutions and algorithms to their products and services, as well as combine them with other technologies. For example, machine learning has been combined with software robotics and hyperspectral imaging.

## MACHINE VISION

Finland has a long tradition of research in pattern recognition and machine vision. The Finnish industry uses machine vision solutions widely, and several technology companies are applying AI to their machine vision and video- or image-related products.

## NATURAL LANGUAGE PROCESSING (NLP)

NLP is an emerging technology area in Finland with many high-level research and publications on the subject. Several companies have developed NLP-based products and services for a number of business verticals.





# FINNISH AI COMPANIES

FINLAND OFFERS A VARIETY OF DATA-DRIVEN COMPANIES, BRINGING CUTTING-EDGE AI SOLUTIONS TO THEIR CLIENTS IN ALL BUSINESS VERTICALS.

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## CONSULTING & CUSTOMIZED AI SERVICES



Ai4Value has over 20 years of AI development under our belt, although the company was established in 2018. Some of Ai4Value's differentiating factors include being extremely speedy in solution deliveries, thanks to our mature, pre-trained algorithms. Ai4Value's NLP algorithms also speak Finnish, which is not common. Actually, they speak any language.



Artific AI provides customized machine learning services. We help your business discover the power of AI to benefit people and society. Our R&D team produces software products that automate processes and assist in decision-making.



DAIN Studios is a Finnish-German data and AI consulting company established in 2016. We define and execute data and AI strategies and implement machine learning solutions and data platforms and applications. Our clients come from a variety of industries, such as telecommunications, manufacturing, banking, insurance, media and pharmaceuticals.



Digious is a Healthtech specialized software house, with special skills for modern technical innovations and strong experience for demanding and highly regulated markets. We provide consultant services in Healthtech AI solutions development and lifecycle management including regulatory approval support. Our vision is to build the digital future for better healthcare.



Dynamik enables profit leaps by transforming data into intelligent processes through sustainable AI solutions. Our services consist of pre-made algorithm modules and AI strategy consulting. Crafting modern automated solutions powered by artificial intelligence is our passion and we have a long-standing record in redefining industrial impossibilities.



Emblica is not your average data science team. We excel at custom-made data solutions built with machine learning, data engineering and service design. We have a variety of AI projects under our belt from the fields of production and performance optimization, business intelligence and robotics. Innovative data utilization and R&D is where we thrive.



Fourkind helps discover growth opportunities fueled by emerging technologies using our expert services in management consulting and hands-on value creation. Together with our clients we're deconstructing and solving problems others claim unsolvable.



Futurice is a new breed of innovation consultancy with digital at its core. Founded in Helsinki, we have 300 consultants in London, Helsinki, Stockholm, Berlin, Munich and Tampere. We bring together a lean start.



Gofore is a consultation company providing digitalization-related expert services. With our data and AI services, we help our customers recognize the full potential of data and algorithms. We also help them move from early experiments to production implementations by providing multi-skilled data and AI experts and teams.



## CONSULTING & CUSTOMIZED AI SERVICES



MarshallAI provides AI and machine learning-based solutions for automatic processing of visual data. Our end-to-end platform empowers regular users to teach a machine to do their will in complex sensing tasks without writing a single line of code. The main user segments are smart cities and law enforcement.



Reaktor is a strategy, design and technology partner for forward-thinking companies and societies. As a part of our consultancy and agency services, our 40+ industry-leading AI experts define, plan and build data-intensive competencies and solutions – and help you revamp your strategy, processes and culture on the way.



Siili is a unique combination of a digital agency and a technology powerhouse. The starting point for all our work is a deep understanding of human behavior. Siili is a go-to partner when seeking growth, efficiency and competitive advantage through digital solutions and AI. We provide trustworthy AI, intelligent experiences, decision support and automation.



Silo AI is the largest private AI lab in the Nordics – a trusted AI partner that brings competitive advantage to product R&D. We build AI-driven solutions and products to enable autonomous vehicles, industry 4.0, smart devices, networks and cities.



Smartbi builds production-grade AI / ML solutions to help organizations on their path from AI roadmaps to execution. Smartbi has strong experience in the pulp and paper, process and healthcare sectors, and already works with some of Europe's largest industrials and healthcare providers.



Solita seamlessly combines expertise from strategic consulting to service design, software development, AI and analytics, cloud and integration services. We are over 1,000 experts in Finland, Sweden, Denmark, Estonia, Belgium and Germany.



Top Data Science delivers AI with results. Our transparent and explainable AI solutions help our customers establish more autonomous industrial processes and business practices.



Vaisto is a project- and service-minded software engineering company with a focus on select industry domains, including smart connected vehicles and machinery along with industrial automation. Our expertise covers a full stack of industrial AI and analytics, from sensing and data collection to data engineering and computing infrastructure as well as machine learning models and frameworks.



# SUCCESS STORIES IN AI COLLABORATION

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## TOP DATA SCIENCE & BROSE

Top Data Science cooperated with Brose to develop an AI-powered weld seam inspection solution for the automotive industry.

[Read more >>](#)

## SILO.AI & RAMBOLL

Together with Ramboll, Silo.AI developed a machine learning-based solution for optimizing chemicals during a water treatment process.

[Read more >>](#)

## DIGITAL WORKFORCE & TOYOTA MATERIAL HANDLING NORWAY

Digital Workforce delivered RPA solutions to Toyota Material Handling Norway to improve their customer experience and build a competitive edge.

[Read more >>](#)

## SOLITA & KONE

Together with Solita, KONE is enhancing the predictive maintenance capabilities for more than 150,000 elevators with sensor data, machine learning and analytics.

[Read more >>](#)

## REAKTOR & KESKO

Reaktor partnered with Kesko to improve user experience with machine learning and AI algorithms in their online grocery store.

[Read more >>](#)

## FUTURICE & FIDELIX

Futurice and Fidelix developed a tool that helps to identify and diagnose anomalies with equipment responsible for indoor air quality.

[Read more >>](#)



# AI TOOLS & APPLICATIONS

## AI DEVELOPMENT & GOVERNANCE



AILiveSim Oy enables the efficient AI algorithm training and testing of autonomous machines through intelligent simulation.



Lempea Oy is a Nordic forerunner in software development for embedded systems, whose mission is to connect its customers' equipment to the cloud. RAIN is Lempea Oy's distributed no-code platform to connect data to AI models for enhanced productivity with a vision to democratize data and AI consumption through edge to cloud. Users design applications with GUI, including an AI model library.



Saidot is a platform for teams who want to make their AI transparent and explainable and invite their end users into a dialogue around transparency. We help our customers build AI registers and deploy trustworthy AI.



Speechly is a Helsinki-based deep tech company building developer tools for complex voice user interfaces on any platform.



Talent Base

Talent Base is one of the leading companies in developing an artificial intelligence governance and auditing model that comprehensively covers all aspects of AI governance. We help organizations to prepare for and comply with the forthcoming EU AI Act and the sustainable use of AI as well as scale up their benefits in a controlled manner.



Valohai is the only MLOps platform that automates everything from data extraction to model deployment. Train, evaluate, deploy, repeat.

## CHATBOTS



Front AI is a game changer for customer service. We are a leading company that specializes in intelligent bots that fluently understand natural language. We automate routine contact in customer service using conversational AI. We help you provide an automated 24/7 service for your customers. Front AI operates in Finland, Sweden and Denmark.



Giosg is a sales acceleration platform enabling companies to easily utilize AI in their communication with customers and target the most valuable individuals to accelerate their sales. Our AI chatbot and AI targeting are built for this.



Hotelway provides AI tools to support communication for hospitality. In practice, this means we design, build and update chatbots on behalf of hotels. We also offer other solutions.



Ultimate.ai is the world's most advanced customer service automation platform, replacing a market of USD 900 billion in global spend on support agent salaries with 10x ROI in cost savings for clients. Ultimate.ai's proprietary multilingual NLP models drive customer satisfaction for millions of consumers through automation.



Upseller is a Finnish digital sales and software company. Upsy Shopping Helper™ is a virtual salesperson for small and medium webshops to boost their sales.



# AI TOOLS & APPLICATIONS

## NLP & VOICE RECOGNITION



Etuma's mission is to provide our customers with high-quality feedback analysis to enable data-driven business. We help companies turn their data into insights and profits. Our cloud-based analysis integrates with existing systems and processes. We are pioneers in customer and HR feedback analytics with a strong research background of over 20 years.



FIBRES is a cloud-based tool for continuous foresight, futures work and trend scouting in corporations and consultancies. We use natural language processing to assist human users in making sense of qualitative data and mapping out their future operating environment.



Flowrite is an AI-powered writing tool that turns words into ready-to-send emails, messages and posts in your personal style. It is designed for those whose work depends on communicating effectively and is powered by the latest advancements in AI.



Headai

Headai provides fair, transparent and sustainable AI that offers actionable business analytics for human decision-making. Headai helps automate your business intelligence by making textual data interoperable and comparable. Based on over 20 years of experience in cognitive sciences, award-winning Cognitive AI is 100% Headai's IP. In production use, no R&D periods are needed.



ILOOM'S Wordloom® can find out what your visitors and customers think – and why. We use freely worded comments from both – using open survey comments, chat discussions, product recommendations and more – to find the most meaningful common opinions and their tonality. We listen to what people say – rather than assume what their thoughts might be.



Inscripta provides language-agnostic speech recognition solutions for healthcare and other industrial use cases.



Lingoes.ai

Lingoes.ai gives you insights from text data in 109 languages and the superpowers of a data scientist. Easily train custom natural language processing models or use our ready models to analyze multilingual text. Integrate into your apps and processes in no time with our APIs.



Lingsoft is a full-service language management company and one of the leading providers of language services and solutions in Finland and the Nordic countries. In addition to translations, we provide a wide range of services and solutions for the analysis, processing, production and management of spoken and written language.



Lumoa is the easiest customer feedback analytics service for medium-sized and large enterprises. Lumoa's AI solution makes customer voice relevant for business decision makers by predicting the impact of customer experience improvements.



Speechly

Speechly is a Helsinki-based deep tech company building developer tools for complex voice user interfaces on any platform.



VXT Research creates enterprise software solutions based on textual machine learning. VXT Engine offers features like smart search, auto-tagging, metadata enrichment, semantic classification and multi-language handling for many uses. Our solutions help you utilize masses of unstructured texts in your organization to enhance your own knowledge workflows.



# AI TOOLS & APPLICATIONS

## MACHINE VISION



Aiforia equips pathologists and scientists in preclinical, academic and clinical labs with the most powerful deep learning artificial intelligence and cloud-based technology. Aiforia's solutions help increase the speed, accuracy and consistency of analyzing large and complex medical images across a variety of fields from oncology to neuroscience.



Candour Biometrics offers automated ID document checking and identity verification based on the biometrics of the user's face. Candour ID is a mobile-compatible online service enabling the end user to verify his/her identity using an official ID document, like a passport or ID card, combined with a facial image..



Labra AI Vision is a deep learning-enabled machine vision system that is designed for the quality inspection needs of industrial companies. Its advantages are ease of use, understanding complex patterns and continuous learning. If you can see it from an image – we can teach it to Vision.



MarshallAI provides AI and machine learning-based solutions for the automatic processing of visual data. We give regular users the power to replicate human sensing and complex decision-making on a programming-with-data platform. The platform has minimal dependencies and is suited for environments ranging from portable edge devices to multi-server-based cloud processing. The pre-existing algorithms have won several recent competitions in terms of accuracy and resource efficiency.



Visidon develops AI-based image and video enhancement technologies, such as HDR, super resolution, noise reduction and frame interpolation. As an established provider in the mobile industry, our algorithms are highly optimized for embedded platforms with low power and limited memory capacity.



VisionAppster is the first online marketplace for buying and selling image analysis software. We develop a machine and computer vision software platform and related cloud services. Our customers develop vision software with ready-made components based on modern computer vision and machine learning. VisionAppster marketplace provides a way to distribute and sell the image analysis software.



Wapice is an award-winning Finnish IoT, Industry 4.0 and AI company. Wapice employs over 340 IIoT and AI experts in Finland. Wapice's IoT-TICKET®, Data Analytics Suite and Building monitoring products allows the creation of massive-scale, production-grade IoT, AI / ML and vision applications quickly and easily to significantly reduce time to market.



# AI TOOLS & APPLICATIONS

## SMART ROBOTS & MACHINES



AiliveSim Oy enables the efficient AI algorithm training and testing of autonomous machines through intelligent simulation.



CrossControl delivers HMI displays and edge computing solutions for industrial vehicles operating in demanding environments. Our approach to AI focuses on analysis at the edge, with cloud integration.



Delfoi's Industry 4.0 solutions allow companies to plan, execute and manage their manufacturing and delivery processes. Delfoi's products and services for production scheduling and control and robot offline programming enable shorter lead times, faster ramp-up, less inventory and improved delivery accuracy.



Dynamik provides AI-controlled robotic packaging line entities in collaboration with our partner Robotmation Oy. This includes conveyors, packaging robots and AI-based software for automated and intelligent layout planning and interaction with the robots in real time.



GIM Robotics' software solutions for mobile machinery are working in all weather conditions. They enable shared and full autonomy operations and make machines more intelligent, precise, efficient and safe. Our competence includes sensor fusion, real-time 3D localization and mapping, traversability analysis, computer vision systems and dynamic object tracking.



Solteq is a Nordic IT provider and software house that specializes in digital business solutions. Our mission is to simplify the digital world to make a better tomorrow.



ZenRobotics is the leading supplier of intelligent sorting robots for the waste industry and the first company to apply AI-based sorting robots to a complex waste-sorting environment.

## ROBOTIC PROCESS AUTOMATION



Aito enables smarter predictions for intelligent automation. We provide the brains for your bots. Robot software developers experiment, integrate and operate machine learning predictions for intelligent automation workflows on Aito's cloud service up to 10 times faster than other platforms. Do it without struggling with code and use predictions with any RPA platform.



Digital Workforce automates and maintains your business processes, freeing up the time of your employees for more purposeful work. Digital Workforce is a trusted advisor and a globally leading independent provider of services in intelligent automation on an industrial scale.



MOST Digital automates and digitizes routine knowledge work and data handling. In every work community, there are time-wasting routines. Up to 60 % of a professional's work days are administrative routines. The resource waste is amazing – billions of euros in Finland alone – every month. MOST focuses on solving this problem.



Siili is a unique combination of a digital agency and a technology powerhouse. The starting point for all our work is a deep understanding of human behavior. Siili is a go-to partner when seeking growth, efficiency and competitive advantage through digital solutions and AI. We provide trustworthy AI, intelligent experiences, decision support and automation.



## EDUCATION & TRAINING

**CLANED®**

The Claned AI learning platform makes sure you know how your learners are learning. Claned automatically collects and analyses the learning data from every interaction happening on the platform. This way, you'll be able to track learners' progress and measure the impact of online learning on your organization's performance.

**eximia**

Eximia is a Finnish technology and education company that has developed a new individual learning software for students. By using artificial intelligence, texts, essays and mathematical tasks answered by the student are evaluated immediately. This enhances learning, increases learning motivation and helps improve one's own skills.

**SCHOOL DAY**

School Day is a unique AI-backed solution improving social-emotional learning and wellbeing in K-12 education. School Day asks students questions about their wellbeing, analyzes the data and provides real-time insight. It is the best way for schools and districts to support student wellbeing.

**VALAMIS**

Valamis combines the leading learning technology with user-centric design, data science and integration capabilities. Valamis LXP is a complete learning ecosystem serving both the needs of an individual and organizations.

**WordDive**

WordDive is an AI-powered mobile app and online service for learning languages. It offers 10 languages to learn and helps users reach conversational language skills after exercising for an average of 63 hours. Our newest product, Master English, is focused on teaching high-level English skills. It is currently available only in selected international markets.

## HUMAN RESOURCES

**etuma** 

Etuma's mission is to provide our customers with high-quality feedback analysis to enable data-driven business. We help companies turn their data into insights and profits. Our cloud-based analysis integrates with existing systems and processes. We are pioneers in customer and HR feedback analytics with a strong research background of over 20 years.



Headai provides fair, transparent and sustainable AI that offers actionable business analytics for human decision-making. Headai helps automate your business intelligence by making textual data interoperable and comparable. Based on over 20 years of experience in cognitive sciences, award-winning Cognitive AI is 100% Headai's IP. In production use, no R&D periods are needed.

 **Jobilla**

Jobilla aims to be the #1 candidate-driven recruitment solution in the world. We aim to disrupt the recruitment market by optimizing the recruitment funnel with a platform that generates more qualified candidates than any other solution and helps you hire the best candidates with AI.

**talent**  **adore**

TalentAdore adds the human touch to recruitment and empowers you to turn job candidates into your greatest fans. Our Virtual Recruitment Assistant (VRA) is an end-to-end candidate engagement-focused recruitment platform that integrates an applicant tracking system, AI-based communication and matching technologies along with advanced automation.

## RETAIL & E-COMMERCE

**aiwo**

Aiwo's unique AI solution allows you to follow how your customer experience is living and evolving. You can identify new phenomena that require your attention, follow the impact of your actions in your customer base and grow your business by constantly keeping your finger on the pulse of the customer experience. Lead with facts – not opinions.

 **Custobar**

Custobar enables efficient collection and use of customer data – whether it is aimed for marketing campaigns or more personalized customer service.

 **Feedbackly**

Feedbackly offers an all-in-one customer experience measurement and analytics tool that enables you to automate the analysis of your entire customer experience journey with behavioral targeting, intelligent automation and predictive analytics based on real emotions.

 **HOUSTON  
ANALYTICS**

Houston Analytics delivers the results of analysis as fully operational, automated AI solutions. Our vertical solutions embed analytics seamlessly into our customers' business processes, delivering improved outcomes and returns, one decision point at time.

 **KLEVU**

Klevu is an intelligent site search solution designed to help online businesses increase onsite sales.

**LUM**  **A**

Lumoa is the easiest customer feedback analytics service for medium-sized and large enterprises. Lumoa's AI solution makes customer voice relevant for business decision makers by predicting the impact of customer experience improvements.

**nosto** 

Nosto's AI-powered Commerce Experience Platform empowers retailers to build, launch and optimize 1:1 digital experiences without the need for dedicated IT resources or a lengthy implementation process.

 **RELEX**

RELEX Solutions offers SaaS solutions to optimize all core retail processes, including demand planning, merchandising, supply chain planning and operations, using all available internal and external data. We work with leading retailers across the world to drive sales, improve product availability, reduce operational costs and remove waste.

*Sniffie*

Sniffie is an intelligent pricing automation platform for retail and e-commerce companies. Our tool consists of pricing analytics, AI-powered dynamic price optimization, automated repricing and market monitoring solutions. Our price optimization algorithm is a combination of reinforcement learning and demand estimation.

**SOLTEQ**

Solteq is a Nordic IT provider and software house that specializes in digital business solutions. Our mission is to simplify the digital world to make a better tomorrow.

 **Speechly**

Speechly is a Helsinki-based deep tech company building developer tools for complex voice user interfaces on any platform.

**UTOPIA**  
ANALYTICS

Utopia's unique advanced AI learns to mimic human decision-making and behavior. It offers higher automation rates with better quality than traditional rule-based AI tools at a lower cost. Utopia also maintains the AI models to keep them high quality and up to date. Utopia AI is language-agnostic, and it works in any language and any dialect.

 **visit**

Visit® is a leading visitor analytics solution analyzing over 10 billion visitors annually. Retail stores and shopping centers all around the world use Visit® AI-driven solutions to achieve maximum customer experience in retail premises.

 **zoined**

Zoined provides an out-of-the-box cloud service called Zoined Retail & Restaurant Analytics for different roles, from top management to individual employees on a store or restaurant level. Automated insights uncover root causes for changes in KPIs, and demand forecasting algorithms are automatically tuned based on individual customer data.



## MARKETING & MEDIA



BCaster is the fastest and most trusted AI platform for user-generated photos & videos (UGPV). We help companies leverage responsibly authentic stories from people who use their products and exponentially increase opportunities to inspire, engage and connect with customers. Our advanced platform automates the entire UGPV process from capture to distribution.



Digiplaza provides high-quality robocalls with unlimited capacity that help you reach your customers efficiently and reliably. One of our many advantages is a highly skilled speech recognition system. You can actually speak with our system and not just push buttons for an answer.



Liana Technologies is a SaaS company providing cloud-based digital marketing and communications solutions. The Liana® Cloud technology stack includes solutions for email marketing, marketing automation, PR and media, website and apps along with e-commerce.



Neuwo is SaaS service for intelligent content classification and brand safety. We enrich your valuable data and enable both endemic and undisruptive ad targeting through relevant content, contextual advertising, brand safety and SEO optimization.



SomeBuddy (Someturva) has been created to protect and give first aid to the victims of cyberbullying and online harassment. Artificial intelligence dominates the center of SomeBuddy, scaling the expensive professional help to all those in need. The team's mission is to protect more than 2 billion people by 2025.



Valossa provides unparalleled video recognition and content intelligence capabilities to capture new value from video for monitoring and evaluation, automotive, industrial manufacturing and smart spaces. Valossa AI is a world-leading technology platform that enables a completely new generation of analytics and content profiling tools that bring forward new ways of monetizing video.



Visidon develops AI-based image and video enhancement technologies, such as HDR, super resolution, noise reduction and frame interpolation. As an established provider in the mobile industry, our algorithms are highly optimized for embedded platforms with low power and limited memory capacity.



Utopia's unique advanced AI learns to mimic human decision-making and behavior. It offers higher automation rates with better quality than traditional rule-based AI tools at a lower cost. Utopia also maintains the AI models to keep them high quality and up to date. Utopia AI is language-agnostic, and it works in any language and any dialect.

## FINANCIAL & LEGAL TECHNOLOGY

### ELINAR

Elinar provides productized AI solutions for various industries and purposes, including finance, medical, legal and GDPR. Our tools are ready to be distributed and embedded into our partner solutions worldwide. Elinar partners utilize ElinarAI to virtually solve natural language understanding problems by embedding ElinarAI into their offerings. Elinar automates manual processes to get better results in your business.



FabricAI uses artificial intelligence to automate purchase invoice processing and bring cost savings. FabricAI is a tireless and effective assistant for accounting to process 95% of the purchase invoices automatically. With FabricAI, the accountant has to pay attention only to relevant invoices.

### IPRally

IPRally provides a new-generation AI tool for patent and R&D professionals. The award-winning deep learning graph neural network technology gives a significant efficiency boost for novelty and invalidation searching, for example.



UPRIGHT  PROJECT

P3 Cloudasset is a payment SaaS provider with vertical solutions for banking, insurance, telco and real-time commerce.

The Upright Project is a technology company with a mission to incentivize companies to optimize their net impact. Upright has built an ML-based model that quantifies the net impact of companies, enabling smarter decision-making for investors, consumers and employees. The model is compliant with the most recent EU sustainable finance regulation.

### ZEFORT

Zefort is a smart contract archiving solution with bank-level security. AI takes care of the boring tasks and makes post-sign contract management a zero-effort process. Zefort's UX is exceptionally good – try it out yourself with a free trial.

## REAL ESTATE



Blok is the largest digital real estate brokerage in the Nordics. Blok has built an advanced platform and combined it with unique data to create access to completely new ways of buying and selling apartments. By serving both sides of the market, Blok is perfectly positioned to disrupt the core of how real estate transactions will be done in the future.



Kodit.io is redefining how people buy, sell and rent homes by eliminating time-consuming and costly procedures related to real estate transactions. The company offers iBuying and data-driven brokerage services to home sellers as well as freshly renovated and safe city apartments for home buyers.

## BUILDING AUTOMATION



720° is the first indoor climate AI solution in the world and a global market leader. It is the complete solution for indoor climate monitoring, analysis and reporting. We help real estate and sustainability professionals optimize indoor conditions while eliminating related costs.



IISY provides Freesi indoor climate management and optimization software, AI and devices for real estate. Freesi helps our clients improve their tenant experience, optimize costs, reach indoor climate and environmental, social and governance targets. Our clients are large property portfolio investors, cities, municipalities and construction companies.



## AUTOMOTIVE, LOGISTICS & TRANSPORTATION



Awake.AI is leading the digital revolution in maritime logistics. The company provides a collaboration and optimization platform for maritime logistics and port operations that helps reduce emissions, save time and costs from port calls, and improve operational planning.



Bluugo's unique digital platform Tracking Cloud™ offers companies innovative digital solutions utilizing the latest technologies such as IoT, AI and machine learning. We help you optimize your supply chains and maintenance processes and better understand your business with data insights.



Sensible 4 is a self-driving technology company. We develop full-stack autonomous driving software, AD-Kit, that turns any vehicle into a self-driving one and allows it to operate in any weather and environment. Sensible 4's positioning module is the market leader in terms of performance, offering superior navigation, accurate positioning and smart filtering for driving in limited visibility.



Solteq is a Nordic IT provider and software house that specializes in digital business solutions. Our mission is to simplify the digital world to make a better tomorrow.



Unikie develops cutting-edge technology solutions for automotive and industrial domains. We focus on ADAS, telematics, analytics and machine learning solutions, software and algorithms.



Visy specializes in vision technology and AI-based logistics and access control. We create intelligent systems to automate our customers' vital processes in container terminals and industrial sites. Our pioneering AI development has resulted in industry-leading accuracy rates for license plate, container code and wagon ID recognition.

## DEFENCE & SAFETY



ICEYE provides synthetic aperture radar (SAR) imaging solutions that see through clouds and darkness. ICEYE sensors can image independently of sunlight. Since the microwave frequencies penetrate clouds and rain, the weather will never be a problem.



MarshallAI provides AI and machine learning-based solutions for the automatic processing of visual data. We empower warfighters, without AI or programming expertise to replicate human sensing and complex decision-making. The platform has minimal dependencies and is suited for environments ranging from portable edge devices to multi-server-based cloud processing. The United States Department of Defense appointed MarshallAI as the winner of the first international AI competition in September 2021.



Secapp is a critical communications and alerting SaaS platform. It is built to broadcast mass notifications, alert individuals and teams and collect critical data. It can be integrated into various systems and devices, which enable automated communications and alerting. All this is included in a platform where the data remains secure and owned by the customer.

## AGRICULTURE & FORESTRY



Yield Systems focuses on accurate and low-cost data production with synthetic data, virtual reality training environment for algorithms, machine vision and cloud analytics. A lack of accurate, relevant crop data is also one of the key bottlenecks for adopting AI in agriculture more widely.

# MANUFACTURING & MAINTENANCE



Distence's Condence.io technology allows our customers to enable remote value-added services and products, design new business models, prevent unscheduled shutdowns as well as improve the redundancy of existing operational models.



Epec provides control system solutions for mobile machinery. We help our customers design and manufacture efficient, safe and environmentally friendly mobile machines that enable machine users to maximize their productivity. We are a solution provider specializing in embedded control systems, information logistics systems for mobile machines and information systems for communicating with machines.



Factory Harmonizer helps process operators and engineers run their production more efficiently and with fewer breaks. In our work creating data-driven analytics engines, we want humans and computers to augment each other.

Procemex is the leading global manufacturer of smart camera-based web monitoring and web inspection systems for pulp and paper industry. The company has pioneered the visualization of quality and production efficiency problems in the paper machine environment for nearly 20 years. Procemex is a single-source machine vision solutions provider for product quality and machine efficiency.



Quva was formed to enable organizations to benefit from the vast volumes of data they produce through sensors and other sources. Our focus supports the transformation of manufacturing companies toward Industry 4.0. We do this by enabling big data and leveraging sensor data and the power of cloud computing.



RoadCloud enables cost-effective, safe and environmentally friendly road maintenance. Real-time hyperlocal road condition data combined with dynamic routing allows road maintenance contractors to reduce winter service costs and salt use. It's time we bring roads into the digital era.



Spectral Engines develops and produces groundbreaking smart material sensing technology, which can measure the very make-up of materials.



Trueflaw offers automated flaw detection systems for industrial testing using machine learning based on non-destructive testing (NDT). Trueflaw's FlawML solution works with several different NDT methods and is available as standalone edge AI devices and in cloud-based deployment. FlawML is validated using industry gold standard reliability metrics.



Visual Components is a globally recognized developer of 3D manufacturing simulation software for companies that need to design and validate production solutions confidently. Visual Components software provides open interfaces that allow connectivity with a wide number of AI and ML solutions.



# HEALTHCARE & WELLBEING



Aiforia equips pathologists and scientists in preclinical, academic and clinical labs with the most powerful deep learning artificial intelligence and cloud-based technology to increase the speed, accuracy and consistency of analyzing large and complex medical images across a variety of fields from oncology to neuroscience.



ApoDigi focuses on digitalizing the pharmacy industry. We have created multiple solutions for the pharmacy business – both pharmacists working in a community pharmacy and customers.



Avaintec offers AI-as-a-Service solutions. Avaintec's offices are located in Helsinki and in China in the cities of Hangzhou and Chengdu. Avaintec's AI services have been designed to improve the operational efficiency, data processing and decision-making of healthcare and social care organizations.



Bittium is a high-tech company specializing in medical technologies, R&D services, secure connectivity and communications and tactical communications.



Cerenion is a science-based university spin-off that develops technology for the measurement of brain function for diagnostic and therapeutic purposes in medicine.



Combinostics provides its SaaS cNeuro solution, which is a data-driven clinical decision support tool. cNeuro perfectly fits the workflow of radiologists and neurologists – or other doctors specializing in memory disorders.



Digious is a Healthtech specialized software house, with special skills for modern technical innovations and strong experience for demanding and highly regulated markets. We provide consultant services in Healthtech AI solutions development and lifecycle management including regulatory approval support. Our vision is to build the digital future for better healthcare.



Disior develops 3D analytics software for medical doctors that analyzes, quantifies and parameterizes medical images. As a result, the software turns medical images into automated numerical data and highly accurate patient-specific 3D model.



Etsimo Healthcare offers a channel-agnostic AI / ML platform for delivering data-driven healthcare to the masses.



Gillie.AI is an artificial intelligence service predicting changes in health and wellbeing. The solution is targeted for home care, nursing home and remotely monitored customers. It reads various forms of data and sends alerts on potential deviations.



HealthFOX's digital service concept has been developed to provide a remarkable improvement in the quality, time management and cost-efficiency of healthcare, self-care and rehabilitation. Our COVID-19 CARE solution is available to support doctors and citizens in their fight against viruses.



Inscripta provides language-agnostic speech recognition solutions for healthcare and other industrial uses.

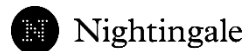
# HEALTHCARE & WELLBEING



MVision is a Helsinki-based company operating globally. The company was born out of a deep desire to harness AI in winning the war on cancer. MVision AI exists to provide clinicians with the finest, most reliable tools to improve clinicians' workflow and help them to focus on patient care.



Myontec offers its customers a new dimension in understanding their muscle behavior. We have created a broad and open user-based platform that enables the user to collect biosignal data and combine it with other relevant information and data.



Nightingale is transforming future health with its pioneering blood testing service.



Predicell works for better healthcare and welfare services by combining ecosystems, data platforms, analytics and preventive care paths.



TrueMed builds a safer world without counterfeit products. Our solutions protect consumers, companies, societies and lawful funds. We develop and deliver 100% non-additive methods for product protection, counterfeit detection and offline tracing. Our technology is based on AI and computer vision. Our end users can benefit from our technology on their regular smartphones.



Verso Vision's solution identifies and automatically monitors patient activity and motions in their room. The technology is based on video analytics, artificial intelligence and machine vision analysis. The Verso Vision fall detection system automatically triggers the nurse call system if the patient falls, gets up from the bed, stays in the bathroom longer than usual or leaves the room. Verso's monitoring and alert profiles can be defined per patient or room. Verso Vision human recognition technology can be used in hospitals, nursing homes or in a home care environment.



Vivago® is a unique nurse call / safety phone solution for nursing homes, home care providers and hospitals that enables preventive measures, safety alarms and customer-centric care. The Vivago solution is a modern nurse call system.



Wellness Foundry's main product is MealLogger, a digital nutrition coaching platform. Based on a database of over 5 million meals, Wellness Foundry has developed deep neural networks that enable meal recognition and analysis based on meal images. The product has been piloted with numerous customers, including the City of Helsinki.



# CONTACT INFORMATION

**BUSINESS  
FINLAND**

## AI BUSINESS

Outi Keski-Äijö, Head of AI Business Program

+358 50 5577 663

[outi.keski-aijo@businessfinland.fi](mailto:outi.keski-aijo@businessfinland.fi)

## INVEST IN FINLAND, DIGITALIZATION

Hanna Hyttinen, Senior Advisor

+358 40 5410 580

[hanna.hyttinen@businessfinland.fi](mailto:hanna.hyttinen@businessfinland.fi)

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