Eindhoven AI Systems Institute

EAISI

EINDHOVEN
AI SYSTEMS
INSTITUTE

TU/e

EINDHOVEN AI SYSTEMS INSTITUTE

The Eindhoven AI Systems Institute combines all TU/e Artificial Intelligence activities. Top researchers from various research groups work together to create new and exciting AI methodologies and applications with a direct impact on the real world. TU/e has been active in the field of AI for many years, which gives the new institute an excellent starting position to build upon.

AI FOR THE REAL WORLD

Using our traditional strengths in systems engineering and our close ties with industry, we aim to leverage the huge potential of AI to real-world applications in industrial engineering systems.

The combination of these activities in one institute offers advantages in terms of synergy between researchers, student teams, fundraising and talent recruitment, cooperation with the business community, and profiling of TU/e as a leading institution in the growing field of AI. Unlike other AI institutes, EAISI will focus on the use of data and algorithms in machines, such as robots, autonomous cars and medical equipment, which has always been a strong aspect of TU/e and the Eindhoven Brainport region. In addition, the new institute will focus on the interaction between humans and systems, including trustworthy and transparent methods resulting in moral and ethical AI.

COLLABORATION WITH INDUSTRY

Building on the traditionally close ties of TU/e with industry, EAISI is partnering with a number of leading companies and organizations, both at a regional, national and European level. These include among others:

- ASML
- Philips
- NXP
- Brainport Eindhoven
- AI NL Coalition
- 4TU.Federation
- EuroTech

Are you also interested in collaborating with EAISI? Mail us at eaisi@tue.nl

RESEARCH & EDUCATION VACANCIES

EAISI focuses on deepening AI through innovative research in data and algorithms, widening AI by bringing in the human element: ethics, law and society and making AI a fundamental part of all engineering applications. Because TU/e is located in the Eindhoven Brainport region it is easy to connect with industry and quickly take AI applications to the next level.

In order to advance AI related research TU/e has many vacancies varying from assistant professor, associate professor to full professor.

Please check jobs.tue.nl and join us!

As of September 2020 TU/e aims to offer two master's programs; *Data Science and AI*, and *AI Engineering Systems*.

SPECIFICALLY, OUR RESEARCH WILL FOCUS ON THE FOLLOWING 3 TOPICS:

HIGH-TECH SYSTEMS AND ROBOTICS
- Guaranteed machine performance
- Autonomous machine operation and smart human-operator support
- Multi-agent robotics
- Predictive maintenance

HEALTH APPLICATIONS
- Improved diagnostics
- Personalized and wearable health systems
- Better understanding of personal health states
- Preventive health management

MOBILITY
- Vision and sensor capabilities for autonomous driving
- Data analytics for effective transportation systems and distributed traffic management
- Advanced Driver Assistance Systems

AI AND STUDENT TEAMS

TU/e is a breeding ground for young engineers addressing societal challenges. They do so in projects that combine education, innovation and entrepreneurship funded by TU/e and our sponsors. Several student teams are using AI in their projects, to mention a few:

- **Blue Jay** Strives for a future with safe, interactive and autonomous flying drones, which can serve as autonomous assistants indoors and outdoors.

- **Fruitpunch AI** Our mission is to apply AI to do good and to connect and educate the AI engineers of the future. We organize an international AI esports competition and weekly AI events to put AI research into practice.

- **Solar Team Eindhoven** Works on sustainable mobility by developing a comfortable, self-driving family car that maximizes the use of solar energy by efficiently using energy for herself and by sharing it with others. Participates in the Bridgestone World Solar Challenge in Australia, defending their 3-time championship.

- **Tech United** Competes with autonomous soccer robots and autonomous service robots. Both years are world champions of 2019 and many teams before.

- **University Racing Eindhoven** Builds a high-tech autonomous, electric race car for the Formula Student competition. Each year they build an entirely new car.

INTERESTED TO LEARN MORE?

Or to discuss any other AI challenge? Let's talk! Contact us at eaisi@tue.nl

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