

AAU IT AND DESIGN: KNOWLEDGE FOR THE WORLD



WE ADDRESS GLOBAL CHALLENGES
through education, research and knowledge
collaboration that create tomorrow's:

Digital solutions that consider human needs

E.g. via software that reveals what data companies are collecting about you¹ – and digital communities for young people with cognitive disabilities.²

Technology and knowledge for sustainability

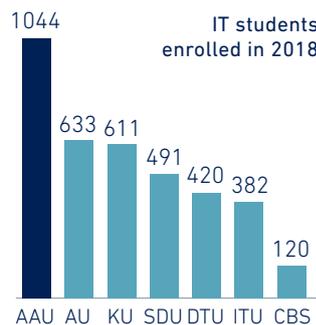
E.g. when we create the world's first modular laboratory for water infrastructure – to help eliminate the global annual water wastage of 10,000,000,000,000 litres³.

Architecture and design that integrates aesthetics with engineering

E.g. the EU invests millions of DKK in our work to reduce heat loss from buildings⁴, promote circular economy and create sustainable urban districts the world over⁵.

DENMARK'S LARGEST IT UNIVERSITY

AAU admits 28% of all Danish IT students⁶ – and educates them with our acclaimed PBL model⁷.



THE WORLD'S 4TH BEST ENGINEERING EDUCATION



AAU has Europe's best engineering programmes and the 4th best in the world, according to MIT and 50 global thought leaders¹⁵.

THE WORLD'S 4TH BEST UNIVERSITY FOR ENGINEERING



AAU placed 4th among the world's universities in Engineering, the best ranking in Europe¹⁶.



Denmark's best computer science environment

AAU is the highest ranked university in Denmark in Computer Science, measured either on total number of publications or number of publications among the 10% most cited publications in the area⁹



"Smart traffic lights" are faster and greener

In conjunction with FlexDanmark, the Danish Energy Agency and LB Group, AAU develops traffic light algorithms to reduce travel time by 20% while halving CO2 emissions.¹⁰



Computer vision to prevent drowning accidents

83% of drowning fatalities take place outside the presence of others. But AAU researchers are developing computer-vision software that informs public emergency services when a drowning accident is about to occur. This can save lives, and save society up to EUR 24.1 million annually.¹¹

Technological advances improve quality of life

800,000 Danes have hearing loss, but in the future, hearing aids will eliminate the annoying cocktail party effect of many people speaking simultaneously. Using machine learning, AAU's Audio Analysis Lab developed software to remove noise, making speech 15% clearer.¹²

Two Medialogy students at AAU CPH have developed a virtual reality program that gives autistic children an opportunity to practice social skills in a virtual circus concert.



AAU, Danish TV station DR and Cool Kids are now examining options for extending the concept to other productions¹³.

100 entrepreneurs and 300+ agreements – annually

- AAU enters into 300+ agreements per year with companies like Vestas Wind Systems and Nokia Bell Labs.
- Last year, AAU helped 100 IT entrepreneurs start their business.
- Previous AAU successes include Trifork and nanosatellite company GOMSpace with over 1700, 500 and 150 employees, respectively.
- We share 80/20 professors with B&O and Grundfos – staff members using 20% of their time on research at AAU.
- AAU also collaborates with SMEs, e.g. the award-winning business networks and clusters BrainsBusiness and InfinIT.¹⁴



SOURCES:

¹ AAU.dk: 'Nyt program afslører, hvad der sker med dine private data'
² AAU.dk: 'Projekt vil skabe digitale fællesskaber for unge med kognitive handicap'
³ AAU.dk: New Lab Will Help Conserve 10,000 Billion Litres of Water a Year
⁴ AAU.dk: Research Group on Energy Performance and Sustainability of Buildings
⁵ AAU.dk: Aalborg-bydel skal være frontløber for bæredygtigt samarbejde
⁶ Ministry of Higher Education and Science: Optag 2017 for IT-uddannelser
⁷ AAU.dk: AAU's pedagogical model is further strengthened
⁸ Leiden Ranking 2017: Mathematics and Computer Science
⁹ Leiden Ranking 2017: Mathematics and Computer Science

¹⁰ Digitalhub.aau.dk: Big Data to Make Us Smarter in Traffic
¹¹ Digitalhub.aau.dk: Computer Vision to Prevent Drowning Accidents
¹² Digitalhub.aau.dk: Better Speech Intelligibility with New Technology
¹³ Digitalhub.aau.dk: 'VR: Children with Autism Practice Social Skills with a Children's Circus Show'
¹⁴ BrainsBusiness.dk and InfinIT.dk
¹⁵ Massachusetts Institute of Technology (MIT) The Global State of the Art in Engineering (Graham, Ruth 2018)
¹⁶ U.S. News & World Report, 2017