

THE TECHNICAL FACULTY OF IT AND DESIGN



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. we have created the world's first modular laboratory for water infrastructure – to help eliminate the global annual water wastage of 16,000,000,000,000 litres³. In fact, AAU places second best in the world within SDG #6 – Clean Water and Sanitation⁴.

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.

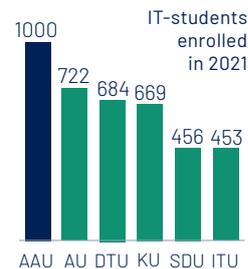
THE WORLD'S 6TH MOST SUSTAINABLE UNIVERSITY



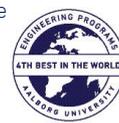
E.g. AAU delivers the world's best sustainable education – SDG #4.¹⁵

DENMARK'S LARGEST IT UNIVERSITY

AAU admits 23% 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 leaders¹³.

EUROPE'S BEST UNIVERSITY FOR ENGINEERING

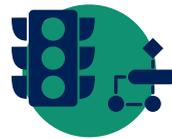


AAU placed 8th among the world's universities in Engineering, the best ranking in Europe¹⁴.



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 area⁸



"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.⁹



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.¹⁰

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.¹¹

Two Medialogy students at AAU CPH have developed a virtual reality programme 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 productions¹².

Entrepreneurship and commercial contacts are key

- AAU enters into app. 300 agreements per year with companies like Vestas Wind Systems and Nokia Bell Labs.
- Annually, AAU supports about 80 potential IT entrepreneurs
- Previous AAU successes include software company Trifork and nanosatellite company GOMSpace with over 00 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 collaborates closely with SMEs, e.g. through the clusters Digital Lead and Energy Cluster Denmark.

TRIFORK.
...think software



GOMSPACE

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 2021 for IT-uddannelser
⁷ AAU.dk: AAU's pedagogical model is further strengthened
⁸ Leiden Ranking 2019: Mathematics and Computer Science
⁹ Digitalhub.aau.dk: Big Data to Make Us Smarter in Traffic

¹⁰ Digitalhub.aau.dk: Computer Vision to Prevent Drowning Accidents

¹¹ Digitalhub.aau.dk: Better Speech Intelligibility with New Technology

¹² Digitalhub.aau.dk: VR: Children with Autism Practice Social Skills with a Children's Circus Show

¹³ Massachusetts Institute of Technology (MIT) The Global State of the Art in Engineering (Graham, Ruth 2018)

¹⁴ U.S. News & World Report, 2022

¹⁵ Times Higher Education Impact, 2021