

Adrian Maciejewski

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PROFILE

Final-year BSc student in General Engineering (Cyber Systems) at DTU, focused on applied mathematics and computation. Bachelor thesis on 3D neutron computed tomography, an inverse problem. Strong software and embedded engineering background from 4+ years of part-time industry work. Aiming for research in applied mathematical analysis, combining rigorous models with numerical methods and machine learning.

EDUCATION

- BSc in General Engineering (Cyber Systems), DTU** 09.2023 – 01.2027
Bachelor thesis: 3D Neutron Computed Tomography (DTU Compute, supervisor Mirza Karamahmedović) – mathematical modelling and reconstruction formulated as an inverse problem. 09.2026 – 01.2027
GPA 10.70 / 12. Mathematics and computation focus, including: Mathematical Modelling (12), Introduction to Operations Research (12), Mathematics 1a/1b (12), Advanced Engineering Mathematics 2 (10), Introduction to Numerical Algorithms (10), Statistics (10), Introduction to Partial Differential Equations (ongoing).
- Academy Profession in Computer Science, UCN** 09.2020 – 01.2023
Acquired practical skills in software development and systems design, multithreaded systems, data analysis and machine learning. For my final project about microservice management system I received **grade 12**.

WORK EXPERIENCE

- Laboratory Assistant** starting 11.2026
DTU Wind (Lab staff, supervisor Assoc. Prof. Nenad Mijatović)
 - PLC programming for laboratory equipment
- Embedded Software Engineer (Volunteer)** 09.2025 – Present
Vermilion (DTU Formula Student Electric Race Car Team)
 - Developing the **vehicle control unit** on STM32 in C: CAN message dataflow optimisation and **FSMD**-based control logic
 - Extending and adapting software for automotive **CAN bus systems** for **telemetry and data acquisition** on a Formula Student electric race car.
 - Built a **real-time data visualization pipeline** working both locally and online
- Student Software Developer** 08.2025 – Present
Dalux
 - Develop and maintain **production software** within a professional agile team, contributing to backend and frontend using C#, .NET, TypeScript, and SQL
 - Participate in the full development cycle including design, implementation, testing, and code reviews across a large codebase contributing to **system features and data handling**
- Student Software Developer** 03.2022 – 07.2025
Nordic Insurance Software (NIS)
 - 3+ years of part-time full-stack development using C#, .NET, MSSQL, TypeScript, React, and GraphQL
 - Built **data-driven systems** and business logic within an agile team, gaining exposure to system design decisions at scale

PROJECTS

- Custom RISC-V CPU and Hardware Accelerator for Image Processing** [GitHub repository](#)
Implemented a subset of the RISC-V instruction set in Chisel (HDL) and designed a dedicated hardware accelerator for image erosion. **Benchmarked performance** trade-offs across a pure **software baseline**, a **general-purpose CPU**, and the **hardware accelerator**.
- Embedded Sensor Data Pipeline with Real-Time Visualization** [GitHub repository](#)
Built a MicroPython-based embedded system that collects sensor data and transmits it over WiFi to a local server for real-time visualization.

SKILLS & LANGUAGES

Mathematics	Mathematical modelling, numerical methods, differential equations, statistics, optimisation / operations research, discrete mathematics, inverse problems
Programming	C, C++, Python, C#, .NET, Java, TypeScript, SQL, React
Hardware Description	Chisel (HDL)
Concepts	Computer architecture, CPU microarchitecture, hardware acceleration, embedded systems, multithreading, data structures & algorithms
Technologies	Linux, Git, CAN bus, Raspberry Pi, ESP32, STM32, MQTT, Kafka, SQL Server
Development	Agile / Scrum
Languages	Polish (native), English (proficient), Danish (learning)