

Mads KNUDSEN



PROFILE SUMMARY

Driven Computer science undergraduate, specializing in software development, data analysis and computer architecture. Transforms theoretical concepts into practical implementation, demonstrated through projects like a custom programming language, video processing application and a linear algebra library. Proficient in multiple programming languages and frameworks, with a passion for building efficient and scalable solutions.

CONTACT DETAILS

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PERSONAL INFORMATION

Citizenship: **Danish**
Languages: **Danish, English**

SKILLS

Programming Languages: C++, Python, Java, JavaScript, SQL.

Frameworks and Tools: Antlr4, PyTorch, Pandas, NumPy, Gradle, GitHub.

Testing and Methodologies: Unit Testing, Integration Testing, Scrum, Risk Management.

PROJECTS

ARDUINO CAR KEY APP *personal project*

◇ Arduino and android app for signaling car locks. Gained experience in android studio, and the arduino open source ecosystem.

ORDER MANAGEMENT SYSTEM *3rd semestre project*

◇ Java GUI application for handling phone repair orders, and notifying customers for pickup. Gained experience in Java Gradle, sql, Material fx, unit-, integration- and user testing.

TABLE PREPROCESSING PROGRAMMING LANGUAGE *4th semestre project*

◇ Python like interpreted language written in c++ for table porcessing, with preprocessing in mind. Gained experience in c++, Antler4, unit- and integration testing.

AUTOMATIC VIDEO CLIP EDITOR *personal project*

◇ Commandline program for selecting Twitch clips for appending and clipping, the program could also upload the finished video to youtube. Gained experience in FFMPEG commandline tool and c library, Twitch and youtube rest api.

LINEAR ALGEBRA MATRIX LIBRARY *personal project*

◇ c++ package for matrix operations, like reduced row echolon form, dot product and getting eigen vectors. Gained experience in unit testing and optimization.

FLEXIBILITY PREDICTOR *5th semestre project*

◇ Timer series deep learning algorithm for predicting the possible flexibility of heat pump units. Gained experience in Pytorch, pytorch lightning, pandas, numpy, plotly and raytune.

EDUCATION

ONGOING COMPUTER SCIENCE BACHELORS DEGREE *from Aalborg University.* **2022–2025**

◇ **Project Management:** Learned agile and DevOps principles from the agile course and got experience developing a solution for a real problem for external stakeholders through the order management project.

◇ **Computational Architecture:** Learned computer micro architecture in the computer architecture and operative systems course and network architecture in the internet working and web programming course.

◇ **Programming structure:** Learned skills for developing sustainable code through oop paterns in the Object oriented programming course.

EXPERIENCE

TAVERN DISHWASHER at Årre Kro **2019.08–2020.05**

◇ Consitently adhered to scheduled shifts.
◇ Worked along side kitchen staff to ensure a smooth operations.

BURGER FLIPPER at Legoland Billund **2023.04–2023.12**

◇ Collaborated with 5+ coworkers in a fast pace kitchen enviroment.
◇ Adapted to a multilayer work hiearchi.
◇ Adapted to time pressured tasks.