Søren Tønnesen

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I was introduced to software development through entrepreneurial projects, which convinced me to pursue an education in computer science. My interests lie in high-level data analysis and manipulation, including machine learning techniques and AI-based algorithms, in combination with microservice software architecture and IoT solutions.

🎓 EDUCATION

Ongoing Feb 2021	M.Sc. Computer Science and Engineering, TECHNICAL UNIVERSITY OF DENMARK, Kongens Lyngby ❯ Specialization : Software engineering, artificial intelligence & algorithms, machine learning
Feb 2021 Sep 2018	B.Sc. Software Engineering, TECHNICAL UNIVERSITY OF DENMARK, Kongens Lyngby ❯ B.Sc. completed in 2.5 years compared to the normal time of 3 years ❯ Thesis with Vaerks : Generic sensor interfacing solution for industrial applications *Grade : 10/12*

🖥 PROJECTS AND RELATED EXPERIENCE

Personal Projects	**INTERESTS** ❯ Portfolio website | Developed in ReactJS & CSS with state management showcasing my projects and a more personalized CV **Feb 2021 - Ongoing development** ❯ Board games | 2048 w/ scoreboard (Java + Spring), Chess (Python console-based UI) Javascript | CSS | Java | Python
Cases & Hackathons	**COMPETITIONS** ❯ Netcompany Case Competition | Used a Miro board to brainstorm, plan and design functionalities to increase users of Smitte|Stop within 1hr in a group of 5. *Result* : COVID-19 ecosystem where Smitte|Stop is a hub for itself, Corona Pas, test bookings and statistical visualization (heatmaps) **Apr 2021** ❯ STARTHack | 36 hrs entrepreneurial hackathon (team of 4). Case : predict parking occupancy based on historical data for Swiss Federal Railway parking lots on a national plan. *Result :* Decentralized microservice webapp developed using Flask with a Python backend and a ReactJS frontend, where historical parking occupancy, weather API data and seasons were used as weighted variables for the developed prediction algorithm **Mar 2021** Miro | Javascript | Python | Flask
DTU	**SELECTED INDIVIDUAL SCHOOL PROJECTS** ❯ Generic sensor interfacing solution | Used an accelerometer to analyze vibrations from industrial machinery (proof-of-concept) for company Vaerks. Developed in C (Cypress SDK), master/slave architecture w/ serial & software communication (SPI/UART + Modbus) between a sensor (ADcmXL3021), microcontroller firmware (FX3) and PC (real-time Python PyQt data visualization) **Oct 2020 - Feb 2021** ❯ IM application | Client/server java application w/ token message passing and a Swing GUI interface, which allows multiple userse to login, chat (private + chatrooms) and upload files **Jun 2020** ❯ 2048 Game AI | Game logic in Java w/ a Swing GUI + a self-playing AI (minimax algorithm + heuristics). Results : Largest tile of 2048 with a score of 31,536 (state space of 1.3 trillion) **Apr 2020** C | Java | Python

📖 TECHNICAL SKILLS AND TOOLS

Listed in decreasing order of proficiency

Languages	Danish (native), English (native), German (intermediate)
Programming	Java, Python, JavaScript & CSS, C, C#, C++, F#, HTML
Development methologies	Agile, Scrum, Waterfall, Feature-Driven, LEAN
Frameworks & tools	git, .NET, React, Spring, Azure, REST, npm, pandas, PyTorch, Flask, BPMN & DMN token modelling, PyQt, TensorFlow, PyQT, Flask, Bootstrap, IoT, MySQL, Kanban & Scrum Boards, JiRA & Azure DevOps, MQQT, RabbitMQ, HTTP, TCP/IP, SPI, UART, Siddhi, Camunda & Signavio
Operating systems	Linux Ubuntu (desktop + server), Windows, MacOS
Hardware	Cypress FX3, Analog sensor devices, ESP32, Raspberry Pi, Arduino

💼 General Experience, Community and Extracurricular

	Work experience, unassociated to software	
Summer Jobs	› Danfoss	Production/solder at Drives/Power Solutions, LEAN, 5S	18 months | Jun 2014 - Aug 2020
	› Wolt	Product delivery, logistics and B2C	3 months | Jun 2019 - Aug 2019
	› Pepperminds	Subscription sales, face-to-face	2 months | Jul 2019 - Aug 2019

	Voluntary work, Experience abroad, Military enlistment	
Community	› University of Copenhagen | Experiment on the adreerg stimulation (beta 2)	Oct 2018 - Dec 2018
	› The Students' Business Relations | Setup, execution of Denmarks largest career fair	Mar 2018
	› IVHQ | Construction (Guatemala), teaching (India), physical education (South Africa)	4 months
	› Danish Defense | Royal life guard, military enlistment	Dec 2015 - Jul 2016

	Courses	
Extra Curricular	› Microsoft | Microsoft Azure AI Fundamentals course (AI-900)	Mar 2021
	› Pepperminds | Intern sales course (face-to-face)	Aug 2019
	› DTU | Laboratory course - (in)organic chemicals and safety (70 hours)	Feb 2018 - May 2018
	› SDU | Work environment and saftey, welding/thermal (§17)	Nov 2017