

JEPPE HINRICHS

Copenhagen, Denmark

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📁 Employment History

2024 – now	Firmware Engineer , Research & Development, Sensata Technologies
2021 – 2023	Graduate Researcher , Brain/Biomedical Microsystems Laboratory
2015 – 2017	Electrical Engineer , Development & Engineering, Welltec
2014 – 2015	Intern , Development & Engineering, Welltec

🎓 Education

2021 – 2023	Master of Science in Electrical Engineering , Korea Advanced Institute of Science & Technology
2021 – 2023	Master of Science in Electrical Engineering , Technical University of Denmark
2020	Research Student (Exchange) , Tokyo Institute of Technology
2018 – 2020	Bachelor of Electrical Engineering , Technical University of Denmark
2013 – 2015	Associate in IT-Technology , Aarhus Business Academy

☰ Selected Projects

2024	18 - Cell Monitoring Unit C++, ISO26262, Functional Safety <ul style="list-style-type: none">– Platform development of hardware/software device driver for new peripheral IC– Implementation of functional safety mechanisms and unit-testing– Using static code analysis in Klocwork and CTC++ to ensure defensive programming paradigm is met
2024	Temperature sensor characterization and optimization C++, Binary Search Algorithm <ul style="list-style-type: none">– Led investigation of performance and accuracy of Steinhart-Hart model on Arm Cortex®-R4 MCU– Implemented optimized temperature calculation algorithm with binary search and interpolation on LUT– Computational overhead metrics on target decreased by >50% using improved algorithm
2023	Master Thesis LTspice, Altium Designer, MATLAB, Xilinx Vivado, Python <ul style="list-style-type: none">– Title: <i>Portable ultrasound system for blood velocity estimation</i>– Analysed research in devices for estimating the velocity of blood– Designed system architecture of portable pulsed-wave Doppler ultrasound imaging device– Implemented Zynq 7000 FPGA bitstream for ultrasound pulser control system– Synthesised Arm Cortex®-A9 based DSP with Fourier analysis
2020	Bachelor Thesis LTspice, Altium Designer, MATLAB, Simulink <ul style="list-style-type: none">– Title: <i>Influence of the output filter parasitic elements on a switch-mode audio amplifier</i>– Led a study into hitherto unexplored control theory of parasitic elements in electronic components– Simulated and synthesized AIM class-D amplifier design– Devised proposal of compensation strategy to improve control loops affected by parasitic elements
2017	Well Depth Acquisition C++, Fusion 360, OrCAD <ul style="list-style-type: none">– Project lead on solution to enable universal telemetry capability during intervention and logging– Implemented mission-critical master and multi-slave half-duplex communications bus over RS485

★ Skills

Languages	🇦🇩 Danish, English, German, Japanese, Korean
Coding	🔗 C/C++, Python, Bash, LabVIEW, Assembly, Make
CAE/CAD	🔗 Altium Designer, KiCAD, OrCAD, LTspice, Qspice, Simulink, Fusion 360
Technologies	➤ Linux, Git, RTOS, Xilinx Vivado, MATLAB, NI-DAQ
Misc.	👤 Academic research, teaching, training, microcontrollers, computer hardware, exercise, music

🏆 Miscellaneous Experience

2023	🏆 Scholarship Award , from Siemens Foundation for research project funding at KAIST in South Korea
2020	🏆 Scholarship Award , from Scandinavia-Sasakawa Foundation for research project at Tokyo Institute of Technology in Japan