

# JEPPE HINRICHS

Copenhagen, Denmark

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## 📁 Employment History

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

## 🎓 Education

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

## ☰ Selected Projects

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2023	<b>Master Thesis</b>   LTspice, Altium Designer, MATLAB, Xilinx Vivado, Python <ul style="list-style-type: none"><li>– Title: <i>Portable ultrasound system for blood velocity estimation</i></li><li>– Analysed research in devices for estimating the velocity of blood</li><li>– Designed system architecture of portable pulsed-wave Doppler ultrasound imaging device</li><li>– Designed and synthesised HV protection T/R switching multiplex circuit</li><li>– Built and assembled analog RF front-end and quadrature demodulation circuits</li><li>– Validated complex network parameters of RF circuitry with network analyzer and frequency response analyzer</li></ul>
2020	<b>Bachelor Thesis</b>   LTspice, Altium Designer, MATLAB, Simulink <ul style="list-style-type: none"><li>– Title: <i>Influence of the output filter parasitic elements on a switch-mode audio amplifier</i></li><li>– Led a study into hitherto unexplored control theory of parasitic elements in electronic components</li><li>– Performed state-of-the-art modeling of control loop using current injection transformers</li><li>– Synthesised A.I.M. Class-D audio amplifier and parametrised testing methodology</li><li>– Devised proposal of compensation strategy to improve control loops affected by parasitic elements</li></ul>
2017	<b>Well Depth Acquisition</b>   C++, Fusion 360, OrCAD <ul style="list-style-type: none"><li>– Project lead on solution to enable universal telemetry capability during intervention and logging</li><li>– Managed a team of engineers in implementing an integration with existing flagship products</li><li>– Engineered CAD models of hardware prototype and panel casing</li><li>– Conducted field testing in Germany, Netherlands, Malaysia, and the United States</li></ul>
2016	<b>Flex Well E</b>   LabVIEW <ul style="list-style-type: none"><li>– Project lead of a testing solution to analyse effects of vertical shifts of high-power transformers in completions</li><li>– Implemented an actuation platform with motor control system using variable speed drives</li><li>– Designed automatic data collection and system modeling with NI-cDAQ and LabVIEW</li><li>– Assembled a hardware testing control panel with built-in HV protection circuits and safety mechanisms</li></ul>

## ★ Skills

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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

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