

# JEPPE HINRICHS

Copenhagen, Denmark

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## 📁 Employment History

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- 2024 – now      **Electrical 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

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- 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, Japan
- 2018 – 2020      **Bachelor of Electrical Engineering**, Technical University of Denmark
- 2013 – 2015      **Associate in IT-Technology**, Aarhus Business Academy

## ☰ Selected Projects

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- 2023      **Master Thesis** | LTspice, Altium Designer, MATLAB, Xilinx Vivado, Python
- Title: *Portable ultrasound system for blood velocity estimation*
  - Analysed research in devices for estimating the velocity of blood
  - Designed system architecture of portable pulsed-wave Doppler ultrasound imaging device
  - Designed and synthesised HV protection T/R switching multiplex circuit
  - Built and assembled analog RF front-end and quadrature demodulation circuits
  - Validated complex network parameters of RF circuitry with network analyzer and frequency response analyzer
- 2020      **Bachelor Thesis** | LTspice, Altium Designer, MATLAB, Simulink
- Title: *Influence of the output filter parasitic elements on a switch-mode audio amplifier*
  - Led a study into hitherto unexplored control theory of parasitic elements in electronic components
  - Performed state-of-the-art modeling of control loop using current injection transformers
  - Synthesised A.I.M. Class-D audio amplifier and parametrised testing methodology
  - Devised proposal of compensation strategy to improve control loops affected by parasitic elements
- 2017      **Well Depth Acquisition** | C++, Fusion 360, OrCAD
- Project lead on solution to enable universal telemetry capability during intervention and logging
  - Managed a team of engineers in implementing an integration with existing flagship products
  - Engineered CAD models of hardware prototype and panel casing
  - Conducted field testing in Germany, Netherlands, Malaysia, and the United States
- 2016      **Flex Well E** | LabVIEW
- Project lead of a testing solution to analyse effects of vertical shifts of high-power transformers in completions
  - Implemented an actuation platform with motor control system using variable speed drives
  - Designed automatic data collection and system modeling with NI-cDAQ and LabVIEW
  - Assembled a hardware testing control panel with built-in HV protection circuits and safety mechanisms

## ★ 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      🏆 **Scholarship Award**, from Siemens Foundation for research project funding at KAIST in South Korea

## Miscellaneous Experience (continued)

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2020      **Scholarship Award**, from Scandinavia-Sasakawa Foundation for research project at Tokyo Institute of Technology in Japan