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**CARL IGELSTRÖM**  
MSc. Electrical Engineering

<https://www.carlw.se>  
<https://github.com/ugglr>

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## CORE COMPETENCES & SKILLS

- **Electronics:** Mixed Analog & Digital Schematics Designer. EMC Certification; HF; RF. Mentor Graphics Pads Logic Vx and Layout; Windchill (PLM); Labview; Cadence OrCad + Allegro.
- **SoC Development:** VHDL; Verilog; Cadence (Virtuoso, ADE L, Layout XL); Xilinx FPGA; Questasim.
- **Web:** HTML5; CSS3; JavaScript: Core, ES6. Node.js; JAVA; Spring Boot; Gradle. Python: Flask, Django

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## PROFESSIONAL EXPERIENCE

<b>Senior Hardware Engineer</b>	<b>Mutian Robotics, Hangzhou, CN</b>	<b>May. 2019 – present</b>
<ul style="list-style-type: none"><li>• Develop robot power management, motor drive, ARM micro-controller control system hardware;</li><li>• Complete the device selection, schematic diagram, PCB Layout design;</li><li>• Submit BOM form, make purchase request and prepare hardware documentation;</li><li>• Responsible for hardware debugging and testing, team collaboration to meet product planning;</li><li>• Responsible for solving the problems in the production/processing and, for product maintenance;</li></ul>		
<b>Exp. Electronics Engineer</b>	<b>Axis Communications, Lund SWE</b>	<b>Sep. 2015 – Jan. 2019</b>
<ul style="list-style-type: none"><li>• PCB Electronics; Analogue/Digital mixed Schematic Designer, New Product innovation. (PADS Vx)</li><li>• Verification of signal integrity and system robustness, laboratory testing (QA, Thermal eval. Etc.)</li><li>• Electromagnetic compatibility (EMC) testing and Certification; CE, UL, FCC, TUV, KCC, Rolling Stock.</li><li>• Agile hardware testing workflow expert; Kanban, Scrum, Jira, MS Teams Tech. support.</li><li>• Product Life-cycle Management (PLM: Windchill) Super User, future feature group &amp; Tech. support.</li></ul>		
<b>Software Engineer Intern</b>	<b>Wayne, GE Oil &amp; Gas, Malmö SWE</b>	<b>Jun. 2014 – Sep. 2014</b>
<ul style="list-style-type: none"><li>• Developed automated production HW tests using Labview, Machine Vision and Machine Learning.</li><li>• Executed prototype plans for automated sensor calibration rig, Bench and equipment sourcing.</li></ul>		
<b>Electrical Engineer Intern</b>	<b>Electrolux, Shanghai CN</b>	<b>Jun. 2012 – Aug. 2012</b>
<ul style="list-style-type: none"><li>• Prototype development &amp; Embedded Linux programming. UX/UI Study: Design of Android application</li></ul>		

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## EDUCATION

<b>MSc. Electrical Engineering</b>	<b>Lund University. Lund, SWE</b>	<b>Fall 2009 – Fall 2015</b>
<ul style="list-style-type: none"><li>• <b>Specialization:</b> Design of Processors and Digital Systems (SoC); China Profile.</li><li>• <b>Graduate Coursework:</b> Structured VLSI Design on FPGA (VHDL+Xilinx), Digital IC-Design (CMOS), DSP-Design, MEMS Fabrication on Silicon, Integrated AD/DA converters, Advanced Analogue Amplifiers</li><li>• <b>Undergraduate Coursework:</b> Analogue and Digital Electronics, Mathematics, Physics, Numerical Analysis, Statistics, Databases &amp; Algorithms in Java, Digital Signal Processing, Java Fundamentals.</li><li>• <b>Exchange:</b> Zhejiang University, Hangzhou China, half year special program for civil engineers.</li></ul>		
<b>Mandarin &amp; Chinese Culture</b>	<b>Zhejiang University. HZ, CN</b>	<b>Aug. 2013 – Aug. 2014</b>
<ul style="list-style-type: none"><li>• Chinese Language and culture exchange. HSK 4 equivalent.</li></ul>		

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## PROJECTS

- **Axis P8815-2:** Machine Vision & Deep Learning Hardware. Development Leader/Tech. Lead. Analogue/Digital HW Designer. Several new solutions implemented, full product responsibility.
- **Axis P7304:** Analog to Digital Video Encoder. HW Designer, Component Sourcing, Testing, EMC.
- **Axis Q1659:** *Enterprise 20Mp Network camera.* HW Testing and QA/EMC. Co-Dev. Canon Japan
- **Axis Q3708-PVE:** Enterprise Quad HD 180° network camera. HW Testing and QA/EMC.
- **Master Thesis:** HDMI Signal Tapping and Digital Encoding over TCP/IP. Successful prototype.

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**Languages:** English: Full Professional Proficiency. Chinese: Professional Proficiency. Swedish: Native.

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