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CARL IGELSTRÖM
MSc. Electrical Engineering

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

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

PROFESSIONAL EXPERIENCE

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

EDUCATION

MSc. Electrical Engineering	Lund University. Lund, SWE	Fall 2009 – Fall 2015
<ul style="list-style-type: none">• Specialization: Design of Processors and Digital Systems (SoC); China Profile.• Graduate Coursework: Structured VLSI Design on FPGA (VHDL+Xilinx), Digital IC-Design (CMOS), DSP-Design, MEMS Fabrication on Silicon, Integrated AD/DA converters, Advanced Analogue Amplifiers• Undergraduate Coursework: Analogue and Digital Electronics, Mathematics, Physics, Numerical Analysis, Statistics, Databases & Algorithms in Java, Digital Signal Processing, Java Fundamentals.• Exchange: Zhejiang University, Hangzhou China, half year special program for civil engineers.		
Mandarin & Chinese Culture	Zhejiang University. HZ, CN	Aug. 2012 – Aug. 2013
<ul style="list-style-type: none">• Chinese Language and culture exchange. HSK 4 equivalent.		

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.

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