

CV

Waqar Hameed

Personal Information

Name: Waqar Hameed
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About: A software engineer, with a huge passion for mathematics,
looking for a job to quench his thirst for complex problems.

Education

2010–2015	Master of Science in Engineering, Engineering Physics Faculty of Engineering (LTH), Lund University <ul style="list-style-type: none">- Specialization in control engineering, systems and signals. Additionally specialized in mathematics and algorithms.GPA 4.7 (5.0). Thesis title: <i>Multi-Objective Optimization of Voyage Plans for Ships</i>.
2007–2010	Upper secondary diploma in natural science program Malmö Borgarskola <ul style="list-style-type: none">- Received a scholarship for excellent academic performance.

Work Experience

2023–	Software engineer Axis Communications <ul style="list-style-type: none">- Embedded Linux kernel development.
2018–2023	Software engineer Axis Communications <ul style="list-style-type: none">- Created the embedded artificial intelligence platform for Axis products from the ground up; integrated several hardware accelerators for neural networks (NPU). Work also included writing an efficient C++ D-Bus service (with accompanying C API library) abstracting the hardware for processing tensors, deploying models and running inferences.- Maintained and integrated Linux kernel modules for artificial intelligence compute accelerators.- Chip bring-up for internal and external hardware devices.- Tech lead for several chip platforms as well as managing the daily team workflow (Scrum).- Supervised master thesis students and summer interns (Thesis title: <i>Self-Optimization of Camera Hardware</i>). New potential candidates for the team were also interviewed by me.- Held yearly courses about converting and quantizing neural network models targeting embedded devices.

2016–2018	Software engineer trainee in automatic control Tetra Pak <ul style="list-style-type: none"> - Tetra Pak's two-year young talent trainee program, where only a handful are chosen from hundreds of applicants. Developed several computer vision programs using OpenCV, built a data analysis tool and a portable high-speed data acquisition program for programmable logic controllers. - Worked abroad for half a year in Italy and China.
2015	Thesis work ABB Corporate Research <ul style="list-style-type: none"> - Thesis work done at ABB's research facility in Västerås, Sweden. Developed an efficient algorithm for optimization of voyage plans; reduced the computational time from hours to only a few minutes.
2014–2015	Teacher assistant Faculty of Engineering (LTH), Lund University <ul style="list-style-type: none"> - Taught younger students in mathematics and control engineering. The work also included marking of examinations and supervision of labs.

Computer Skills

Programming languages: C, C++, x86 and ARM Assembly
 Scripting languages: Python, Bash, Emacs Lisp
 Software: GNU toolchain, Meson, Docker, BitBake, OpenCL, OpenCV, OpenVX, TensorFlow Lite
 Operative systems: Linux, FreeRTOS

Languages

Native: Swedish, Hindi/Urdu
 Fluent: English
 Basic: Spanish, Swedish Sign Language