Oskar Enoksson

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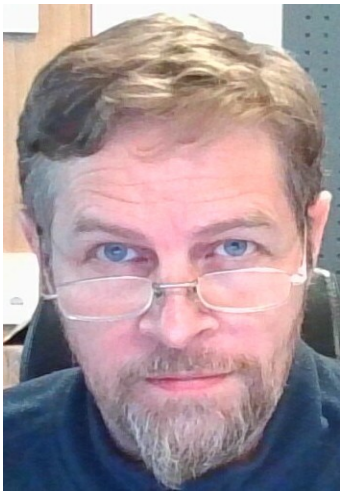

Work experience

Freelance development **2025-01 -**
Developing prototypes for three of my own embedded product ideas. (LiIo battery, PIC, KiCAD, FreeCAD, CNC and PCB manufacturing)

Nordluft **2024-06 - 2024-12**
Improving performance and adding new features to a base station written in Python for controlling a drone swarm. (Ardupilot, Python, Bitbucket, Git, RTK/GNSS)

Freelance development **2023-07 - 2024-06**
Developing an ARM based drone with AI features. Ported Arducopter (Rockchip Arm, RTLinux, Ardupilot, Yocto, Armbian, V4L, Tensorflow, MIPI/CSI, Kalman filter).

Dinbox **2022-07 - 2023-06**
2022-2023 Embedded software responsible for a range or products, including Yocto Linux and bare metal custom boards based on various ARM processor brands. Integration with IoT cloud services and web UIs. (MQTT, IoT, Azure, ARM, NFC, TPM, devicetree, Yocto, C++, C, Gitlab, Python).

Bombardier/Alstom **2018-03 - 2022-07**
2020-2022 Linux- and web-app architect for an embedded webserver application. Flask backend, Bootstrap frontend. Created a custom Yocto Linux for the ARM SOC. (Gitlab, Python, Flask, Javascript, VirtualBox, Docker, Yocto Linux).
2018-2019 Developed a new ARM-based SIL4 embedded product based on Kalman filter for navigation. (Math, C, Eclipse, Synergy, LDRA, Python, ARM, Windows)

Scania AB **Södertälje — 2012 - 2018**
2016-2018 Worked with embedded software development and gas flow models for the engine control unit. FreeScale-based target (C, gcc, Jira, Perforce, Eclipse, Simulink, Matlab).
2015-2016 Worked with applied multiphysics simulations and shape optimization methods for R&D. Developed a new toolchain for gradient-based aerodynamic shape optimization of ducts using Python and Java. (Linux, Ansa, Catiav5, StarCCM+, Java, Python, Numerical methods, CFD).

Skills

Mathematical models, High performance computing, Algorithms, statistical/numerical methods.

C, C++, Python, GNU toolchain, Git, Gitlab, webb technologies.

Embedded Linux, Yocto, Armbian, Nix, Uboot, Devicetrees, Linux servers, KVM, Virtualization, Docker, VPN, SSL

Aircraft, Automotive, Railway, Combustion engines, Electronic design, KiCAD, FreeCAD, CFD, StarCCM+, Icem, CatiaV5, SolidWorks, Project lead, Purchasing

Languages

Swedish (native)
English (fluent)
French (basic)
Bahasa Indonesia (some)

Hobby

Car mechanics, SBC projects, Drones, Music, Hiking, Scuba diving, Stockholm Makerspace.

Scania AB forts. **Södertälje — 2012 - 2018**
2014 Responsible for building a Hadoop cluster for evaluation at Scania. (RHEL, Hadoop, HDFS, Hortonworks).
2012-2014 Worked with development and maintenance of Linux clusters, servers and workstations. (RHEL RedHat Satellite, LDAP, Kerberos, XFS, Gluster, Isilon)

FOI **Stockholm — 2004 - 2012**
Employed as Researcher at the aircraft technology department at FOI (Swedish Defence Research Agency) in Kista.
2009-2012 Aircraft technology and HPC research. (OpenFoam, Edge, IcemCFD.) Manager of FOI's Linux cluster and storage facility in Kista. Project leading, budget, purchase, deployment, maintenance and user-support. (Infiniband, OpenMPI, CentOS, NFS, networking, LDAP, Kerberos, GridEngine, Rocks.)
2004-2008 Participated in developing the the CFD solver "Edge", a F95 solver for supercomputers and workstations. Introduced Subversion as version/revision control tool. (Fortran95, MPI, Python, Shellscript, Subversion, GNU make.)

SMHI **Norrköping — 2004**
Worked 4 months at SMHI with development and maintenance of a oceanographic Fortran code Hiromb.Various scripting work in Perl and Korn-Shell. Platforms: Linux and SGI Irix.

Freelance development **Linköping — 2003**
Worked 6 months with prototype development. Set up a workshop for metal machinery and electronics prototyping. Developed a MSP430 based measure/control computer.

Sectra AB **Linköping — 2000 - 2003**
As a software developer I worked with implementation of aircraft navigation equipment as invented by Håkan Lans. Development platform: Windows. Target was an in-house platform. (C, C++, Windows, ARM, DO178B).

Education

Computer/Electrotechnology **Norrköping – 1989**
Studied one year at a university engineer program

Military service **1990**
15 months as a PB navy telegraphist.

MSc Physics/Electrotech **Linköping — 1991 – 1996**
Emphasis on math, physics and computer architecture. Employed 25% at the math department from year 2. Specialized in applied mathematics. The thesis work at SAAB Aerotech improved an in-house parallel Fortran CFD solver "MultNAS".

Tec Lic Mathematics **Linköping — 1997 - 1999**
Developed new numerical methods and wrote a new parallelized CFD-solver/Adjoint solver in C++, including GUI in GTK++ and OpenGL, for aircraft shape optimization at SAAB. Member of NGSSC and NTM.

References

On request

Selected hobby projects

Contributed to various open-source projects.
Wrote and published a package for efficient, arbitrary size Galois arithmetic https://pypi.org/project/gint/