

## Ove Kåven

Full name: Ove Henrik Kåven  
Nationality: Norwegian  
Year of birth: 1976

### Education

*08/2013–06/2015*

*M.Sc., Computer Science*  
Universitetet i Tromsø (University of Tromsø)  
Specialization: Pattern recognition, statistics  
Master's thesis: "Multiparadigm Optimizing Retargetable Trans-disciplinary Abstraction Language"  
(Also see "Personal projects" on page 4.)

*08/2011–06/2013*

*M.Sc.(Tech.), Electrical Engineering*  
Universitetet i Tromsø (University of Tromsø)  
Specialization: Pattern recognition, statistics  
Master's thesis: "Investigating robot navigation in health care with the Giraff telepresence robot"

*01/2009–06/2011*

*B.Sc., Computer Science*  
Universitetet i Tromsø (University of Tromsø)  
Fall 2010: Teaching Assistant, FYS-2014 (Digital circuit design)

### Employment history

*02/2019–now*

*Google*  
in Zürich, Switzerland  
Site Reliability Engineer

*05/2009–12/2018*

*Kongsberg Spacetec AS, <http://www.spacetec.no/>*  
in Tromsø, Norway  
Software Engineer

- 2012–2018: Ground reception and distribution technology for JPSS (Joint Polar Satellite System)

- Wrote a fully functional, multithreaded Space Link Extension (SLE) implementation during summer break 2012. (The relevant SLE specification documents contain more than 800 pages in total.)
- Subsequent evaluation found this SLE implementation to be superior to competitor offerings, and resulted in Kongsberg Spaceteq landing a multi-million-dollar contract with Raytheon Company. (It’s considered the largest contract in Kongsberg Spaceteq’s history.)
- 2009–2011: Level 0 processor for ALOS (Advanced Land Observation Satellite)
  - Heavy data distribution and image processing tasks were performed in near-real-time by using various pipelining and parallel programming techniques.
  - Very high-profile project due to international cooperation between NASA and JAXA.
  - NASA Awards: “Certificate of Recognition” (2010), “Group Achievement Award” (2011)
- Wrote a CCSDS File Delivery Protocol (CFDP) module, currently used with Landsat-8.
- Module for generating Ogg Theora videos from Front-End Processor (FEP) spectrograms and constellation diagrams.
- Various other modules for decoding and processing satellite imagery, as well as system monitoring.

Supervisor (2009–2014): Arne Nylund  
 Supervisor (2015–2018): Dag Kjetil Sjaaeng  
 NASA Reference: Terri Wood, NASA GSFC

*10/2007–12/2008*

*Inraport.biz*, in Karasjok, Norway  
 System administrator (web hosting, virtual machines, SQL server),  
 Programmer (web services)

*06/2000–09/2007*

*TransGaming Technologies, Inc.*, <http://www.transgaming.com/>  
 in Ottawa, Canada  
 Senior Developer

- Architect of company’s game software portability systems (Cedega/Cider), which allowed video games written for Microsoft Windows to be run on Linux and MacOS X systems.
  - Included things like translating Direct3D to OpenGL, and DirectSound to OSS/ALSA/CoreAudio.

- Also involved implementing the Microsoft DCOM remote object communication protocol (including an IDL compiler).
- Also involved in porting game engines to Playstation 2 and Playstation Portable (PSP).

Supervisor: Gavriel State (co-CEO, CTO, and company founder)

*ca 1997–07/1999*

*Arctic Net AS* (fusion of the two companies below)  
System administrator, Programmer, Telecom specialist

- Language solutions (keyboard drivers, fonts, etc)
- Dictionary system (used by the local public broadcasting)
- Embedded systems (e.g., an IrDA protocol stack for barcode readers)

*ca 1995–1997*

*Arctic Net ANS*  
System administrator, ISP operations  
Owner of company

*ca 1992–1997*

*Vplan Programvare AS*  
Programmer (freelance)

- Business software, language solutions (drivers, etc)

## Non-profits

*08/2008–now*

*Mensa Norway*

Auditor (2008–2017)

Local Secretary, Tromsø Region (2009–2015)

Test Proctor (2009–2015)

*01/2009–12/2018*

*TSI Judo*

Judo brown belt

Treasurer (2014–2017)

*05/2010–12/2018*

*Kirkens Bymisjon* (Church City Mission), Tromsø

Natteravn (Nightwalker). Organized civilian patrols of the city at night (similar to neighborhood/town watch).

08/2010–12/2016

*Røde Kors* (Red Cross), Tromsø

Leksehjelper (Homework help). Helping students (often youngsters or immigrants) who struggle with their homework.

## Personal projects

### **Multiparadigm Optimizing Retargetable Transdisciplinary Abstraction Language (M.O.R.T.A.L.)**

All my life I've looked for a programming language powerful enough for the research I'd like to do, but never found one. Eventually, I've decided to just make my own.

It is intended to be a modern, user-friendly, and fairly high-level general-purpose programming language suitable for scientific computations. But it is also intended to be compiled, to provide high performance, to be scalable to both GPUs and supercomputing clusters, to provide programmer-friendly object-oriented programming as well as scientist-friendly declarative programming, and to provide machine verifiability, to eliminate bugs wherever possible.

Project homepage: <http://sourceforge.net/projects/mortal>

### **Open Source projects**

Over the years, I have contributed to many Open Source projects. Here are some of them, in alphabetical order:

- Allegro (video game library), <http://alleg.sourceforge.net/>
- Debian GNU/Linux (Linux distribution), <http://www.debian.org/>
- DJGPP (GNU C/C++ compiler for MS-DOS), <http://www.delorie.com/djgpp/>
- Maemo/MeeGo, now SailfishOS (Linux for mobile devices), <http://sailfishos.org/>
- MythTV (personal entertainment system), <http://www.mythtv.org/>
- WINE (MS-Windows compatibility layer), <http://www.winehq.org/>
- wxWidgets (cross-platform GUI framework), <http://www.wxwidgets.org/>
- XFree86/DRI, now X.org, <http://www.x.org/>

### **Past personal projects**

Too many to bother listing here, but they include video game engines, operating system kernels, natural language translation systems, reverse engineering tools, astronomical visualization tools, and much more.