

Jonathan Plinio Müller

Curriculum Vitae

Education

- 09/2015–01/2018 **MSc, ETH Zürich, Switzerland, current GPA: 5.50/6.00 .**
- Master program in Electrical Engineering and Information Technology
 - Specialization: Machine learning and computer vision
 - Thesis (in progress): Active stereo vision for depth perception using event based vision sensors
 - ETH Zürich is ranked 1st worldwide in computer science (THE ranking 2017)
- 08/2016–01/2017 **Exchange Semester, Lunds Tekniska Högskola, Lund, Sweden.**
- Dept. of Computer Science
 - Courses on computer vision and interactive computer graphics
 - During MSc program at ETH Zurich
- 09/2011–09/2015 **BSc, ETH Zürich, Switzerland, GPA: 4.59/6.00 .**
- Bachelor program in Electrical Engineering and Information Technology
 - Specialization: Computers and networks

Experience

- 03/2016–08/2016 **Software Engineering Intern, ABB Switzerland Ltd, Corporate Research Center, Baden, Switzerland.**
- Created a C++ library providing crypto operations and machine learning algorithms on encrypted data:
 - Implemented new methods from current research on homomorphic encryption
 - Optimized and parallelized using OpenMP
 - Set up automatic build, test and release process (Gitlab CI, Docker)
 - Created a web app as demonstration prototype for the library created:
 - Ported C++ code to run in the browser using Emscripten
 - Created bindings to Java and Scala
 - Server-side based on Scala-Play and Akka
 - Implemented real time communication with browser client via WebSockets
- 06/2012–12/2012 **Research Assistant, Computer Engineering Group, ETH Zürich.**
- Part of the Permasense research project at ETH and University of Zürich
 - Developed an Android app to distribute and maintain autonomous temperature loggers:
 - Analyzed existing legacy solution, created specs and design accordingly
 - Ported device driver from Linux to Android userspace for interfacing loggers
 - Automated synchronization of deployment and measurement data between smartphone clients
- 10/2012–01/2017 **Co-founder, Head of Software Engineering, Apoveda, Aadorf, Switzerland.**
- Co-founded a soft- and hardware development company besides university, employing students in part-time.
- Responsible for project management, general IT and infrastructure services
 - Business development and branding
 - Involved as project manager and engineer on more than 10 projects (Web, Mobile, Hardware)

- 02/2015–06/2016 **Teaching Assistant**, *ETH Zürich*, Zürich, Switzerland.
- Assisted students in computer engineering lab lessons
 - Provided example solutions and technical support
 - Topics covered were memory management, concurrent computing, network programming and file systems
- 08/2010–02/2011 **Software Engineering Intern**, *Kaden & Partner AG*, Frauenfeld, Switzerland.
- Designed and implemented in-house backoffice solution for time logging and invoicing
 - Reverse-engineered legacy solution, designed new version according to requirements
 - Implemented as web app, using modern web technologies (ExtJS, CakePHP, MySQL)
 - Migrated data to new solution
 - Created a prototype for an Android GIS solution
 - User can record geodata in the field and annotate it with custom data
 - Targeted at city planning and wildlife management officials

Computer skills

Programming	C, C++, Python, Java, Scala, OpenGL, Android, Go, Ruby, Javascript, Emscripten
Web	Ruby on Rails, PostgreSQL, AngularJS, Play Scala, Akka, HTML/CSS, CouchDB
Scientific	OpenCV, NumPy, SciPy, scikit-learn, Matlab, Theano, CUDA, OpenCL, OpenMP
Tooling	Linux, Git, Ansible, Docker, Bash, Zsh, Gitlab, Microsoft Office, Inkscape

Languages

German	Native
English	Fluent
French	Advanced
Swedish	Basic Comprehension

Extracurricular Activities

Entrepreneurship	10/2013 – 12/2015, ETH Entrepreneur Club: executive committee member, responsible for IT, event organization
Outdoors	Road cycling, cyclocross, hiking
Hackathons	Entrepreneur Club Hackathon, StartHack (St. Gallen), HackZurich
Military	2011, 2013 – In total 7 months of compulsory Swiss military service as electronic warfare specialist

Publications

J. N. P. Martel, L. K. Müller, S. J. Carey, J. Müller, Y. Sandamirskaya, and P. Dudek. Live demonstration: Depth from focus on a focal plane processor using a focus tunable liquid lens. In *2017 IEEE International Symposium on Circuits and Systems (ISCAS)*, pages 1742–1743, May 2017.

J. N. P. Martel, L. K. Müller, S. J. Carey, J. Müller, Y. Sandamirskaya, and P. Dudek. Real-time depth from focus on a programmable focal plane processor. *IEEE Transactions on Circuits and Systems I: Regular Papers*, PP(99):1–10, 2017.

J. Müller, M. Keller, J. Beutel, S. Gubler, V. Wirz, and S. Gruber. iAssist for Android Smartphones. Poster presented at NCCR MICS Final Event 2012, Lausanne, Switzerland, 2012. <http://www.mics.org/micsPosters3.php?action=FE12&group=Perma&pno=3>.