

Jan Pohanka

I can describe myself as an experienced engineer/developer with wide variety of interests also in non-technical field. After finishing master's degree on CTU FEE and taste of academic career during PhD. course (specializing on signal and image processing) I started to work in Jablocom s.r.o. and gained many experiences in embedded system development. My work was focused mainly on video encoding, using open source software and porting Linux kernel on new hardware. In a project lead role I helped to bring up the Raven phone.

Since January 2014 I work in Merz s.r.o. specializing on advanced image processing and machine recognition in real-time. I brought deep learning into our person presence detector. Together with a great team we developed an embedded platform running state of the art neural network object detector running above 1 fps and consuming less than 1.5W.



Work experience

Merz s.r.o., Liberec (since 2014)

- R&D Engineer, senior developer, team leader
- Machine recognition and image processing
- Deep learning expert
- Embedded Linux guru

Vysoké nad Jizerou (since 2014, re-elected in 2018)

- Member of municipal council

VaTC Honza s.r.o., Prague (since 2003)

- Instructor of canoeing and kayaking
- Specialization on French rivers and wild water rescue

Jablocom s.r.o., Jablonec n. N. (2010–2014)

- R&D Engineer, project manager
- Development of embedded systems
- Implementation of development and coding standards
- Porting linux to Jablocom's hardware

Dpt. of Measurement, Faculty of Electrical Engineering, CTU Prague (2008–2012)

- Development of a hardware for stereo videometric applications
- Implementation of image processing methods

Biosignal Laboratory, Department of Circuit Theory (2007–2008)

- Research on EEG signal processing
- PC implementation of ERP signal processing methods and algorithms

Dpt. of Normal, Pathological and Clinical Physiology, Charles University (2006–2007)

Development of a control software for laser stimulator DEKA Stimul 1340

H&H Servis, Vysoké nad Jizerou (2002–2005)

Web Programmer and Webmaster

Backend of internet presentations www.kdppvysoke.cz, www.vysokenadjizerou.cz

Education

Czech Technical University in Prague, Faculty of Electrical Engineering (2003 – 2012)

- 2008 – 2012 PhD. course in Measurement and Instrumentation, interrupted in 2012 because of family reasons
- 2008 MSc. degree in the course Biomedical Engineering, graduated *Summa Cum Laude*
Defended diploma thesis EEG-based Subject Identification
- 2006 Baccalaureate in the course Electronics and Telecommunication Engineering, graduated *Magna Cum Laude*
Defended thesis Signal processing in cochlear prosthesis

Extra activities and awards

- JUNE 2009 Attended the Summer school on ADC testing and analysis in Gävle, Sweden
- 2007,2009 Preciosa Scholarship (2×)
Merit scholarship for all time of study

Teaching experience

Courses in microcontroller systems development
Courses in signal processing
Introduction to operating systems

Publications

See [Appendix 1](#)

Gymnázium Ivana Olbrachtů Semily (1999–2003)

- 2003 School-leaving exam (A-level equivalent) with full marks
Excellent study results

Computer and technical skills

PROGRAMMING LANGUAGES	C, C++, Python, Shell scripting, Assembler, VHDL, PHP, SQL, (X)HTML, ConTeXt, (can promptly learn new ones)
OPERATING SYSTEMS AND TOOLS	Linux, Windows, version control systems (GIT, SVN), Eclipse, GNU development tools...
TECHNICAL TOOLS	Deep learning frameworks, Matlab, OrCAD, KiCAD Modelsim, Spice, Xilinx ISE suite
TECHNICAL SKILLS	Deep learning, Signal and image processing, experience with measurement technique, design of microcontroller systems and programmable logic...

Non-technical skills

Mensa confirmed IQ 136 (in czech scale, percentile 99), good communication skills, leadership skills, ability to work in a team, readiness to learn new knowledge, ...

Language skills

English – advanced
French – intermediate

Czech – native
Slovak – passive

Certificates

Driving licence A, B

Hobbies and activity

White water kayaking	Downhill skiing	Music (violin, piano)	Board games
Outdoor sports	Theatre (active)	Literature	Typography

Appendix

Publications

Pohanka, J.: **Use of ADSP-BF533 EZ-KIT Lite in Videometric Applications, Transfer of Image Data.** In Poster 2009 [CD-ROM]. Praha: ČVUT, 2009.

Pohanka, J. - Pribula, O. - Fischer, J.: **An Embedded Stereovision System: Aspects of Measurement Precision.** In Proceedings of the 12th Biennial Baltic Electronics Conference. Tallin: Tallin University of Technology, 2010, p. 157-161. ISBN 978-1-4244-7357-1.

Pohanka, J.: **Stereovision Board for Embedded Smartcamera: Multiplexing of the Sensors.** In Poster 2010 [CD-ROM]. Praha: ČVUT, 2010.

Pribula, O. - Pohanka, J. - Fischer, J.: **Real-Time Video Sequences Matching Using the Spatio-Temporal Fingerprint.** In MELECON 2010, 15th IEEE Mediterranean Electromechanical Conference, Valletta, Malta [CD-ROM]. Malta (Valletta): IEEE Malta Section, Region 8, 2010, p. 911-916. ISBN 978-1-4244-5794-6.

Participation on research projects

GD102/09/H082 — **Sensors and Intelligent Sensor Systems** (as co-worker)

SGS10/208/OHK3/2T/13 — **Methods of spatial measurement and orientation using simple and affordable videometric sensors** (as grant coordinator)

Proposed FRVŠ grant **Modernization of education of microprocessor technic subjects**