# Boris Perović

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**Key strengths:**
EPFL Computer Science Master graduate
Broad knowledge in software and computer systems
International experience – Serbia, Switzerland, USA
Strong analytical, organizational and leadership skills

## OBJECTIVE

I want to apply my knowledge to difficult problems that matter at a global scale, take part in dynamic, team-oriented research projects, and become someone who makes a change towards a more connected, better world.

## EDUCATION

**Oct 2015–Apr 2016** **Stanford University** — Stanford, California, USA
Visiting Student Researcher in Computer Science. Conducted MSc thesis research in Pervasive Parallelism Laboratory, under the supervision of Prof. Olukotun and Prof. Odersky

**Sep 2013–Apr 2016** **Swiss Federal Institute of Technology Lausanne (EPFL)** — Lausanne, Switzerland
MSc in Computer Science, Internet Computing Specialization, core GPA 5.89 / 6 (total 5.42)

**Sep 2009–Sep 2013** **University of Belgrade, School of Electrical Engineering (ETF)** — Belgrade, Serbia
BSc in Electrical Engineering and Computing, GPA 9.58 / 10

## EXPERIENCE

**Jun–Sep 2015** **CERN**, Software Engineering Intern (Summer Student) — Geneva, Switzerland
Worked on ROOT Data Analysis Framework used by all experiments at CERN. Implemented modular outputting of types using advanced C++ templating and code generation. Features I developed are used by thousands of physicists and scientists every day. (C++, LLVM, Clang)

**Aug 2014–Feb 2015** **Net Link Solutions**, Software Engineering Intern — Belgrade, Serbia
Re-implemented easyUML NetBeans UML plugin, pushing it from ~400 to more than 45,000 downloads (code here). Contributed to Neuroph Neural Network Framework. (Java, NetBeans)

**Mar–May 2012** **Serbian Object Laboratories**, Software Engineering Intern — Belgrade, Serbia
Implemented code generation for model-driven development framework SOLoist. (Java, XML)

### Academic

**Feb–Jun 2014** **Swiss Federal Institute of Technology Lausanne (EPFL)** — Lausanne, Switzerland
Teaching Assistant in the course Programming 2 (OOP, intermediate C++, graphics)

**Feb 2012–Sep 2013** **University of Belgrade, School of Electrical Engineering (ETF)** — Belgrade, Serbia
Teaching Assistant in courses Operating Systems 1 and 2 (processes & memory management, scheduling algorithms, synchronization and IPC, I/O, file systems, OS system architectures)

### Selected projects

**Master thesis – Pervasive Parallelism Laboratory, with Professor Kunle Olukotun and Professor Martin Odersky**
Delite – a compiler framework and runtime for parallel, high-performance embedded DSLs. Worked on language virtualization and hiding of the deep embedding from users through the use of Scala macros (Scala)

**Semester project – Distributed Information Systems Laboratory, with Professor Karl Aberer**
Memo-it – a battery aware sensor library and Android mobile application identifying user's memorable moments. Developed several location-based features and the core recommender system (Java, Android SDK)

**Compiler for MicroJava** – lexical, syntactical, semantic analysis and bytecode generation (JFlex, CUP, Java)
**Multiversion Concurrency Control library** with query predicate locking (Java)
**Intelligent agent systems** (reactive, central-coordinated, distributed) for pickup and delivery problem (Java)

**AI for Reversi game** – Minimax algorithm with Alpha-Beta pruning (Java)
**CUDA Fast Fourier Transformation** and performance evaluation. 85x speedup compared to serial version (C++, CUDA)
**Hadoop analytics application** – efficient detection of triangular connections in social network graphs (Java, Hadoop)
**Multithreading kernel** with timesharing. Threads, context switching, semaphores, events (C++)
**ARM architecture processor design** with 5-stage pipeline and caches (FPGA, VHDL)

## FIELDS OF INTEREST

Large-scale computer systems
Operating systems and programming languages
Internet computing and big data
AI and machine learning
Space technologies and novel transportation methods
Project management and entrepreneurship

## COMPUTER SKILLS

| | |
|---|---|
| OS | Windows, macOS, Linux |
| Languages | Java, C, C++, Scala, C#, VHDL, x86 and ARM assembly |
| Technologies | CUDA, Hadoop, MPI, Pthreads, NetBeans Platform, Android SDK |
| Web | HTML, CSS, JavaScript, SQL, JSP, basic PHP |
| Tools | Git, SVN, sbt |

## ACTIVITIES AND ACKNOWLEDGEMENTS

- Aberer K., [et al, including Perovic, B.] (2014) Memo-it: Don't write your diary, sense it, *Proceedings of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct Publication, pg. 203-206*

- Competitions:
  - Chosen as one of the 20 national "Vip students" 2012/2013 by Vip mobile Serbia, among the senior students of the best technology, economy and management faculties in Serbia
  - Member of the **winning team** at FONIS / Microsoft Start conference 24-hour hackathon 2012
  - Participated in numerous coding competitions in algorithms, game development and AI (2011 - 2016)

- **Conferences and seminars:** WebFest.ME 2012, 2011, EESTEC Soft Skills Academy 2011, Microsoft Sinergija 2010
- Feb 2010 – Sep 2013 - Member of ETF Students Alliance. Computer Engineering class delegate. Organizer of science competitions at international conference of students of electrical engineering – Elektrijada 2011, 2012.
- Attended programs at Petnica Science Center – Electronics 1/2 (2006/07), Physics 2 (2008).

- **Volunteered** at international work camps with Young researchers of Serbia:
  - 2009, Iceland – Veraldarvinir, eco, working with children and organizing an exhibition
  - 2008, France – Unarec, teen, renovation of Ecomusée d'Alsace

- Scholarships:
  - Fund for Young Talents Dositeja, Ministry of Youth and Sports, RS (2012, 2013, 2014, 2015)
  - Ministry of Edu., Sci. and Tech. Development, RS (2006, 2007, 2008, 2010, 2011, 2012)
  - City of Belgrade, RS (2007, 2008, 2012)

## LANGUAGES

| | |
|---|---|
| Serbian | Native |
| English | Fluent |
| French | Upper-intermediate |

## OTHER

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|---|---|
| Sport | Won multiple medals at national and international athletics competitions (2007, 2006, 2005) |
| Hobbies | Composing, playing piano, basketball, running, skiing, free climbing |