

# 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 projects, and become someone who makes a change towards a more connected, better world.

## EDUCATION

- |                   |   |                                  |
|-------------------|---|----------------------------------|
| Oct 2015–Apr 2016 | <b>Stanford University</b><br>Visiting Student Researcher in Computer Science. Conducted MSc thesis research in Pervasive Parallelism Laboratory, under the supervision of Prof. Olukotun and Prof. Odersky | <b>Stanford, California, USA</b> |
| Sep 2013–Apr 2016 | <b>Swiss Federal Institute of Technology Lausanne (EPFL)</b><br>MSc in Computer Science, Internet Computing Specialization, core GPA 5.89 / 6 (total 5.42)  | <b>Lausanne, Switzerland</b>     |
| Sep 2009–Sep 2013 | <b>University of Belgrade, School of Electrical Engineering (ETF)</b><br>BSc in Electrical Engineering and Computing, GPA 9.58 / 10   | <b>Belgrade, Serbia</b>          |

## EXPERIENCE

- |                    |   |                            |
|--------------------|---|----------------------------|
| Oct 2016 – present | <b>Freelance, Software Engineering and Consulting</b><br>Working on projects and specialized courses in the domains of web technologies, telecommunications, blockchain, etc. (JavaScript, Node.js, Bash, SQL, Ethereum, Solidity)  | <b>Belgrade, Serbia</b>    |
| Jun–Sep 2015       | <b>CERN, Software Engineering Intern (Summer Student)</b><br>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) | <b>Geneva, Switzerland</b> |
| Aug 2014–Feb 2015  | <b>Net Link Solutions, Software Engineering Intern</b><br>Re-implemented <a href="#">easyUML NetBeans UML plugin</a> , pushing it from ~400 to more than 100,000 downloads (code <a href="#">here</a> ). Contributed to <a href="#">Neuroph Neural Network Framework</a> . (Java, NetBeans)   | <b>Belgrade, Serbia</b>    |
| Mar–May 2012       | <b>Serbian Object Laboratories, Software Engineering Intern</b><br>Implemented code generation for model-driven development framework SOloist. (Java, XML)  | <b>Belgrade, Serbia</b>    |

### Academic

- |                   |  |                              |
|-------------------|--|------------------------------|
| Feb–Jun 2014      | <b>Swiss Federal Institute of Technology Lausanne (EPFL)</b><br>Teaching Assistant in the course Programming 2 (OOP, intermediate C++, graphics)   | <b>Lausanne, Switzerland</b> |
| Feb 2012–Sep 2013 | <b>University of Belgrade, School of Electrical Engineering (ETF)</b><br>Teaching Assistant in courses Operating Systems 1 and 2 (processes & memory management, scheduling algorithms, synchronization and IPC, I/O, file systems, OS system architectures) | <b>Belgrade, Serbia</b>      |

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

## COMPUTER SKILLS

OS	Windows, macOS, Linux
Languages	Java, C, C++, Scala, Solidity, C#, Bash, VHDL, x86 and ARM assembly
Technologies	Ethereum, CUDA, Hadoop, MPI, Pthreads, NetBeans Platform, Android SDK
Web	JavaScript, Node.js, React, HTML, CSS, 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 – Elekrijada 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

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