Curriculum vitae

PERSONAL INFORMATION
Jelena Banjac

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PERSONAL STATEMENT

Jelena is very enthusiastic and passionate about making connections between knowledge of programming and physics. Jelena has a broad spectrum of interest including interdisciplinary projects and innovative solutions.

WORK EXPERIENCE

1 Apr 2017–1 Jun 2018 — **Technical Student** Sector BE-RF-FB, LHC Experiment
CERN, Geneva (Switzerland)

Project: Developing Expert Tools for the LHC
Developing software tools in Python for automated, precision setting-up of low-power level radio frequency (LLRF) loops, which will help expert users to have better control and faster setting-up of the radio-frequency (RF) system in the Large Hadron Collider (LHC) experiment. The aim was to completely redesign the software architecture, to add new features, to improve certain algorithms, and to increase the automation. – *Supervisor: Helga Timko.*

1 Jul 2016–1 Sep 2016 — **OpenLab Intern** Sector EP-LBC, LHCb Computing
Group
CERN, Geneva (Switzerland)

Project: FPGA Based Data Smoother for Sensor Data
Tested to use a sensor smoothing algorithm on an FPGA to directly reduce the noise on raw sensor data in general. Algorithm is implemented on a modern Cyclon V SOC FPGA using HDLs. – *Supervisors: Christian Faerber, Jonathan Machen, Jean-Christophe Garnier.*

EDUCATION AND TRAINING

2018–Present — **MSc in Data Science**
École polytechnique fédérale de Lausanne (EPFL), Lausanne (Switzerland)

2013–2017 — **BSc in Software Engineering**
Faculty of Technical Sciences Novi Sad, Novi Sad (Serbia)
Bachelor with Honours in Electrical and Computer Engineering (B.El.Comp.Eng.)

2009–2013 — **Diploma on completion of secondary education for gifted students**
Mathematical Grammar School, Belgrade (Serbia)

2002–2009 — Elementary Music School "Stevan Hristic", Apatin (Serbia)
Instrument: Piano

2001–2009 — Elementary School "Žarko Zrenjanin", Apatin (Serbia)

PERSONAL SKILLS

Mother tongue(s)	Serbian, Russian
Foreign language(s)	English (C1), French (A1)
Software language(s)	**Python,** MatLab, R, Java, VHDL, Prolog, SQL

ADDITIONAL INFORMATION

Projects
- **Visual Distribution of Endangered Species**,
  2016, Human-Computer Interaction course project
- **Web Application for Restaurant Organization**,
  2016, Internet Software Architectures and Software Development Methodologies joint course project,
  SCRUM team of 3 people
- **Extensible Platform for Structure Visualization and Navigation**,
  2016, Software patterns and components course project, team of 4 people
- **Research about Distributed System for Control and Management of GPS**,
  2016, SCADA Software course research
- **Simulation of Robotic Arm in MatLab**,
  2015, personal research
- **Calculating the position of GPS receiver using GPS signal**,
  2015, Numerical Algorithms and Numerical Software course project
- **Theory of Relativity and Global Positioning System**,
  2013, graduation work in Mathematical Gymnasium, Belgrade
- **Simulation of Random Numbers**,
  2008, Petnica Science Center
- **Connection between Physics and Music**,
  2007, research Talent Search competition

Seminars
- **BalCCon 2014**, Balkan Computer Congress is international hacker conference
- **RAFitDays – workshop: WEB programming**, 2013, IT seminar, Faculty of Computer Science in Belgrade
- **Exchanging program for students with major subjects in Computer Science, Physics and Mathematics**, 2012, Agros Apeitio Gymnasium in Cyprus
- **Seminar of Physics in International Science Center Petnica**, 2010, Valjevo
- **Summer School of Science in International Science Center Petnica**, 2008, Valjevo

Honours and awards
- **District competition in Physics**
  2008 (1. prize), 2009 (1.prize), 2010 (1.prize), 2011 (3.prize), Physics Society of Serbia
- **Award for results achieved in the competition Physics Talent Search**
  2007 (1. Prize), Physics Society of Serbia
- **Republican Physics competition in Serbia**
  2008 (2.prize), 2009 (3.prize), 2010 (praise) Physics Society of Serbia
- **Serbian Physics Olympiad**
  2009 (3. prize), Physics Society of Serbia
- **District competition in Mathematics** 2008 (2.prize), Mathematics Society of Serbia
- **Individual success in 33. and 35. Mathematical tournament** (team championship of elementary
  schools in the Republic of Serbia in mathematics) 2007 and 2009 (3.prize and 1.prize),
  Mathematical Society "Arhimedes", Belgrade
- **District competition in Chemistry**
  2008 (3.prize), Chemistry Society of Serbia
- **The most successful students of primary and secondary schools in Serbia** which are during
  2007/2008 achieved excellent results in competitions at home and abroad (1. praise), Republic of Serbia

Certifications
- **CCNA Discovery: Networking for Home and Small Businesses**, CISCO Networking Academy
- **Database Design and Programming with SQL**, ORACLE Academy
- **International Physics Young Ambassador**, Physics Talent Search 2007

Publications
- **FPGA Based Data Smoother for Sensor Data**, CERN Openlab Student Report, October 5, 2016
- **Developing Expert Tools for the LHC**, Bachelor Thesis, October 10, 2017