

Branimir Pervan | Research and teaching assistant

+385 92 1217 492 • [✉ branimir.pervan@fer.hr](mailto:branimir.pervan@fer.hr) • [🌐 branimir.pervan.pw](https://branimir.pervan.pw)
[in](#) branimirpervan • [🌐](#) bpervan

Education

Formal.....

University of Zagreb, Faculty of Electrical engineering and Computing **Zagreb**
Ph. D. in Computing *Mar 2016–Feb 2020*

Thesis title: *Programming models for heterogeneous systems with accelerators for Machine learning and Cryptographic functions based on architectures with an extendable instruction set*

University of Zagreb, Faculty of Electrical engineering and Computing **Zagreb**
M. Sc. Computer engineering *Sep 2013–Jul 2015*

Thesis title: *Recommender systems in ubiquitous computing*

University of Zagreb, Faculty of Electrical engineering and Computing **Zagreb**
B. Sc. Computer engineering *Sep 2009–Jul 2013*

Thesis title: *Visualization of data sources in augmented reality*

Certificates.....

Coursera, EPFL
Functional Programming in Scala Specialization *2016*

- Functional Program Design in Scala
- Functional Programming Principles in Scala

Coursera, University of California, Irvine
Project Management Specialization *2016*

- Initiating and Planning Projects
- Budgeting and Scheduling Projects
- Managing Project Risks and Changes

Coursera, University of Minnesota
Introduction to Recommender Systems *2015*

Microsoft certificate **Zagreb**
MTA: Software Development Fundamentals (C#, 98–361) *2014*

Professional experience

Vocational.....

Faculty of Electrical Engineering and Computing

Zagreb

Research and teaching assistant

Apr 2016–Present

- Key skills: **Research, teaching, leadership, mentoring**
- Current grades average of the associated Ph. D. programme: 5.00 (out of 5.00)
- Rated average 4.58 (out of 5.00) by students who I work with
- Representative of teaching assistants to the Faculty General assembly
- Last year, I worked approximately 35% class hours over the norm

My research interests can be generalized to these four fields:

- Heterogeneity (Accelerators for Machine Learning and Cryptography, SoCs, GPGPUs, Task scheduling)
- Parallelism (processing, programming, programming models)
- Functional / Reactive programming (Programming highly heterogeneous and parallel hardware, Actor model, elasticity, resiliency, generic software engineering using functional programming languages)
- (Domain-Specific) Programming languages (expressing and automatically detecting parallelism, automatic detection of the most suitable platform type (CPU, GPGPU, FPGA) for code execution)

I am participating as a teaching assistant in the following courses:

- Computer architecture 1, Multimedia technologies, Open computing (Undergraduate)
- Multimedia Architectures and Systems, Laboratory of Computer Engineering 1 (Graduate)
- Reverse engineering and malware analysis (Undergraduate & Graduate)

University computing centre

Zagreb

Lecturer

Sep 2017–Present

- Key skills: **Presenting, knowledge transfer, lecturing**
- Holding lectures for the following courses: “Introduction to PHP and MySQL” and “Introduction to Wordpress”

Sedam IT

Zagreb

Junior software engineer

Mar 2015–Mar 2016

- Key skills: **Java, C#, .NET 4.5, JavaScript, Scala, Cisco**
- I was on a junior software engineer position in a Research and development unit.
- My responsibilities were mainly to solve advanced problems with my team and support other company units in sense of developing frameworks and doing research on subjects company hasn't got any experience with.
- I have worked on Cisco Jabber soft phone (Javascript), provisioning server for other company products (Java, Scala) and extensions for custom CRM solution (C#)

Croatian bishop conference

Zagreb

Web developer

Oct 2014–Nov 2017

- Key skills: **PHP, MySQL, Wordpress, HTML, CSS, Javascript**
- Part-time position consisting of building and maintaining custom CMS solution based on the Wordpress CMS
- I developed custom widgets and plugins on backend, and customized the theme on frontend.
- <http://mladi.hbk.hr/>

Ericsson Nikola Tesla

Zagreb

Summer camp student

Jul 2014–Sep 2014

- Key skills: **Java, Android, OpenCV, REST, Google Glass**
- As a part of Ericsson Summer camp, I worked on a project named “Google Glass shopping” which was an extension to the Ericsson Wallet platform.
- My tasks were mainly on back-end in sense of coding face detection and face recognition subsystem exposed via RESTful API in Java using Jersey framework and Glassfish server. (Java, Android, OpenCV)

Faculty of Electrical engineering and computing

Zagreb

Student assistant

Feb 2013–Jul 2013

- Key skills: **PHP, MySQL, HTML, JavaScript**
- I was student assistant on Course “PHP Application development basics”. My responsibilities were to help students with solving problems given at the lectures and to grade and review students home assignments.

Miscellaneous/Volunteering.....

Croatian Salesian province

Zagreb

Software engineer

Feb 2011–Present

- Key skills: **PHP, MySQL, HTML, JavaScript**
- Administration of at least 5 web pages with programming and administration of backing reseller hosting and individual accounts. (PHP, MySQL)

Multiple employers, Freelancing

Zagreb

System administrator

Sep 2006–Jun 2009

- Key skills: **Windows OS Family administration, Networking**
- Administration of Windows Server based Active directory and domain system with backing network (and network administration). – V. Grammar school, Zagreb
- Technical committee member at International Olympiad in informatics (Zagreb, 2007). Installation and maintenance of network, hardware and software infrastructure.

Projects

Heterogeneous Computing Systems with Customized Accelerators

Researcher

Mar 2019–Mar2022

- ETH Zurich and UniZG FER joint project which aims to develop a novel heterogeneous accelerated computing system architecture based on RISC-V with accelerators for disruptive application domains (namely Machine learning, Crypto processing, Video processing). Furthermore, project includes software support for proposed heterogeneous architecture and validation of disruptive applications. The project is funded by Swiss-Croatian Cooperation programme (Swiss National Science Foundation (<http://www.snf.ch/>) and Croatian Science Foundation (<https://www.hrzz.hr>))

Jobbee

Researcher / Developer

Jun 2016–Dec 2017

- An intelligent matchmaker between generic job offerers and clients, funded by HAMAG-BICRO (<https://hamagbicro.hr/>)

* My other projects can be found on Git repository at <https://github.com/bpervan>.

Programming and Software skills

Basic: C++, C#, .NET, L^AT_EX, VHDL

Intermediate: Android, C, Python, Git, Design patterns, Linux, Low level programming (Microcontrollers and FPGA)

Advanced: Scala, PHP, (My)SQL, Java, JavaScript, Play framework