Branko Kokanović

Curriculum Vitae

General

- *Location:* Belgrade, Serbia
- *Date of birth*: 19.06.1983.
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Education

- *Faculty of Electrical Engineering*, Department for Computer Science and Engineering, Belgrade University, Serbia.
    - Graduated on: *Binding programming system Test with Moodle LMS* with average grade 8.4.
    - (2002 – 2009)
- *Electro technical school "Nikola Tesla"*, telecommunication profile, Belgrade, Serbia.
    - Main subjects: Mathematics, Computer Science, Electronics, Analog and Digital Telecommunications.
    - Graduated on: *FHSS and DSSS Spread Spectrum analysis*
    - (1998 – 2002)

Working experience

- Microsoft – Principal software engineer (with a trips to lead role)
    - worked on SQL core engine – predictable query performance and query optimization, as well as SQL Azure DB – survived implementing service from ground up (2012 – 2021)
    - now working in Maps team, delivering products for enriching OpenStreetMap (2021 –)
- [RT-RK](RT-RK) – Senior software engineer (embedded software development, kernel drivers writing, Assembler/C/C++, 300 developers) (2011 - 2012)
- Mozzart Sports Betting – Software architect (Java based distributed software solution, SCRUM based development, 40 developers) (2007 - 2011),
- MikroDisk – Mikro magazine give-away DVD content manager including template generator (Python/GTK, SQLite, Cheetah template engine),
- Laboratory assistant at "Computer science" department, faculty of Electrical Engineering, Belgrade University (2003 – 2007),

Side projects – contributions

- Huge OpenStreetMap enthusiast – coordinating local community, taking care of openstreetmap.rs, organizing events, programming solutions to work with open data to enrich whole OSM ecosystem, and mapping, mapping, mapping (ask me anything, OSM is huge part of my life)
- LLVM/Clang contributor (C++)
- VideoLAN video filter developer (C/C++/Qt),
- Face Recognition Nextcloud application – Neural network system to detect faces based on DLib, and group faces to persons inside Nextcloud platform (C++/PHP)
- various Nextcloud work
- FractalDirector – Fractal video generator, add-on utility for creating videos containing fractals based on gnofract4d software, now merged with it entirely (Python/GTK),
- various patches – Valknut (C++/Qt), Wikipedia (OCaml) and Videodb (PHP),
- various translations (Serbian GNOME team, Gajim, mBot robot project for kids, Nextcloud…)

Side projects – original work

- Lot of Open Street Map work (Python)
  - Conflation of administrative boundaries in OSM
  - Validation and checker of public transit lines in OSM
  - Localized world map and tile server using data from wikidata project
  - Serbian OSM Lint – OSM Lint checker for Serbia
- DocumentDBCpp – open-source C++ wrapper and object model for DocumentDB – officially endorsed library form Microsoft, but now defunct (C++),
- Logolovac, Filmolovac and Facolovac franchise of Android games (total of 200.000+ downloads from only Serbian market)
- Mozzes – Java application server and middleware framework (Java),
- TitlYU – subtitle editor/converter specifically designed for subtitles from exYU countries (C/GTK, libaspell, libiconv, gettext),
- jDCBot - Java DC++ Bot framework (Java),
- Commit Warning Checker – Eclipse plug in to check for warnings before commit (featured on Softpedia)

University projects

- Binding programming system Test with Moodle LMS (B.CS. thesis) - exam question/test importer and exporter from internal faculty LMS software (named TestBase) into SCORM/QTI format and several others (C++/MFC, XSLT, PHP),
- 8254 – implementation of Intel 8254 programmable interval timer (VHDL),
- MJ2Java – lexical, syntax and semantic analyzer of MicroJava source code and MicroJava to Java source code converter (Java, BYACC/J, CUP),
- Resava – Plagiarism detection system, MOSS frontend (PHP, bash),
- Enigm software – Software for generating crosswords in Serbian language and common Serbian pattern, including database of 15.000 words and descriptions (C, WinAPI)

Summary of qualifications

- Excellent knowledge of code writing in following programming languages: C, Java, Python, C++, Microsoft .NET languages, PHP, Pascal, Assembler (various flavors), Visual Basic, Shell scripting (sh/bash), Java Script/AJAX, Delphi,
- Excellent SQL and database knowledge (MSSQL, PostgreSQL, Oracle,MySQL, MongoDB, CosmosDB in particular),
- Good knowledge of UML modeling and design patterns,
- Good knowledge of computer architecture and organization,
- Advanced knowledge of Linux administration

Other

- Programming languages on level of recognition: Rust, OCaml, Caml, Perl, Cobol, Ada, Lisp, Ruby,
- Worked with various public domain libraries, interfaces and applications,
- Basic knowledge of Windows administration,
- Development environments: PyCharm, Android Studio, Eclipse, Vim, KDevelop, Visual Studio,
- Additional tools: Libre Office, Gimp, and many others (mostly open source),
- Graphical user interface toolkits: GTK, Qt, FLTK, native Windows (WinAPI), MFC,
- 4th at 'Pet dana na Javi' (Five days on Java) competition (five days given to create full web application using SOAP) amongst more than 100 competitors,
- Administrator and co-creator of local network with 20 users/neighbors (Linux based server, Internet connection sharing, including various other services),
- Redaction member of faculty magazine "Generator" (formerly "Otpornik"),
- Valid driving license for vehicles up to eight seats and 3.5t (B),
- US Visa
- Mensa member

Languages

- English (excellent),
- German (basic),
- Serbian (native)