



Nebojša Koturović

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10.10.1995.

N/A in Digital

Serbian, English

Belgrade, Serbia

WORK EXPERIENCE

- **“Orange Cloud”** - C++ Engineer, Belgrade, Serbia *September 2022 — Now*
- **“Tylo”** - C++ Developer, Belgrade, Serbia *September 2021 — September 2022*

EDUCATION

- **“Faculty of Mathematics”** - Informatics - University of Belgrade, Serbia *exp. 2015 — 2024*
- **High school “Dragačevo”** - Financial technician - Lučani, Serbia *2010 — 2014*
- **Elementary school “Milan Blagojević”** - Lučani, Serbia *2002 — 2010*

PROGRAMMING LANGUAGES

C++, Go	★★★★★
C, Rust, Zig, Haskell	★★★★★
Javascript/TS, Python, Java	★★★★★
Lua, Groovy	★★★☆☆

TECHNOLOGIES

Linux, Git, Bash, LLVM, SQL, Qt, OpenGL, OpenCV, CMake, Nix, Docker, Kubernetes, Pulumi, Conan, Web, HTML/CSS, NeoVim, Markdown, Gherkin, Grafana, \LaTeX

TALKS

Title: C++ Dependency management with Nix *C++ Serbia*
Link: <https://youtu.be/Y2Aq8pMsLz4> *23 Feb 2023*

TEAM PROJECTS

Photowall - Web platform for sharing digital images consisted of client-side SPA written in Angular framework and secure performant C++ server. I was in charge of developing blazingly fast server-side application written in C++ that includes public REST API, a built-in framework for defining data flow, models, constraints, interacting with database and resolving permissions in a generic and reusable way built on top of `boost::hana` with advanced TMP techniques.

Technologies: C++, Hana, Restinio, Sqlite, JWT

Link: <https://gitlab.com/matfpvneb/projekti/2019-2020/11-photowall> *Mar 2020 - Aug 2020*

Photon - Application with Qt based GUI where the user can apply a predefined set of effects to an image of choice. My role was developing `rs-img` library that stands as connecting bridge between the front and back end of the application, providing convenient DSL for manipulating images used by end-user. It also provides an easy and modular way for backend implementation in specific frameworks such as OpenCV or ImageMagick wrapped with PImpl idiom. Besides `rs-img`, I've created undo functionality, participated in and supervised Qt GUI and OpenCV backend implementation.

Technologies: C++, OpenCV, Qt

Link: <https://github.com/nkoturovic/RS009-photon> *Dec 2019 - Jan 2020*

Pluton - Minimal text-based file manager for performing basic tasks such as file creation, file deletion, navigation, etc. On this project, I was designing and implemented text-based user interface with TermOx library, expanding existing widgets with new functionality, participating in the development of core/system of file manager engine, exploring immutable data structures with Immer library and combining them with functional style patterns.

Technologies: C++, TermOx, Immer, Range-v3

Link: <https://github.com/mrdakj/Pluton>

Mar 2018 - May 2018

PERSONAL PROJECTS

Ctollvm - Compiler for the subset of C programming language, which can be used to translate C source to native machine code. One of the key features is readable error messages with source code references and traces. It includes lexing, parsing, ast generation, semantical analysis, and code generation phases. It uses GNU tools flex and bison for parsing C source code, a hand-crafted class hierarchy for ast representation, and LLVM library for code generation.

Technologies: C++, Flex, Bison, LLVM

Link: <https://github.com/nkoturovic/compiler-project>

Jul 2019 - Sep 2019

SenseFX - The program gives an immersive first-person game-like 3D virtual experience. It renders a set of rooms based on the directory structure of the user's physical drive and places him inside it. The user has the ability to move between rooms (directories) and interact with 3D objects. Everything is rendered in real-time using OpenGL library.

Technologies: C++, OpenGL

Link: <https://github.com/nkoturovic/sensefx>

Dec 2017 - Jan 2018

WORK SKILLS

- Agile methodology and Scrum framework
- Structured, functional and object-oriented paradigm

INTERESTS

- Artificial intelligence, computer simulations
- Volleyball, basketball and other sports activities

ABOUT ME

Full-time C++ developer pursuing a degree in Informatics, language enthusiast who loves to explore new languages with interesting features. I am obsessed with compile-time programming, functional programming, and code optimizations. Passionate about Linux and free software, enjoy artistic aspects of the software. Most importantly, I love being surrounded by interesting people, learning new stuff, and making connections.