Mateo Cindrić

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Education

- **Technical school Ruđer Bošković** — Zagreb, Croatia
  Computer technician; GPA: 4.80/5.00 — *Sep. 2015 – May. 2019*
- **Faculty of Electrical Engineering and Computing** — Zagreb, Croatia
  Bachelor of Computer Science; GPA: 3.74/5.00 — *Sep. 2019 – Jul. 2022*
- **Faculty of Electrical Engineering and Computing** — Zagreb, Croatia
  Master of Science in Computing — *Sep. 2022 – Jul. 2024*

Experience

- **Sartura** — Zagreb, Croatia
  C/C++ Developer — *Aug 2020 - Jun 2022*
  - **Networking projects**: Worked on eBPF and XDP projects. Fixed bugs on UCI file format configuration parser made with bison/flex. Did research regarding bio-rd networking in Golang. Developed speedtest functionality for a remote device management system.
  - **Sysrepo and Libyang**: Developed Sysrepo plugins for universal system configuration management.
- **Sartura** — Zagreb, Croatia
  Tech Lead for Sysrepo Team — *Jun 2022 - Jan 2024*
  - **C++ Plugin Development**: Refactored multiple plugins from C to C++. Created a new repository as a way to collect all developed plugins instead of using a single repository for each plugin. Introduced common design patterns like Singleton, Factory, Iterator etc. Created a core library for all plugins to use.
  - **Python Tools Development**: Implemented a Python tool which takes the provided YANG model as an input and generates the codebase for the needed C or C++ Sysrepo plugin. The developed tool significantly increased the team's productivity and resulted in a much faster project completion time. Later on, TOML config file support was added as a way to modify plugin generation process.
  - **Plugin Development Documentation**: Written documentation of all developed sysrepo plugins and created libraries. Described the plugin development process and important plugin organizational and design choices as well as IDE support and recommended tools to use. Created a tutorial for a simple plugin.
  - **Development Environment Support**: Written shell scripts for setting up the developer environment with all needed libraries for both C and C++ plugin development. Created a virtual machine with all provided dependencies and tools needed for plugin development.
  - **CI/CD**: Improved Gitlab CI/CD setup for unit and integration testing. Developed Docker images for plugins with included dependencies.
  - **Team Collaboration**: Led internal weekly team meetings and assigned tasks to team members. Offered support to team members by helping them overcome issues and find solutions. Introduced Conventional Commits as a conventions for commit messages.
  - **Client Engagement**: Reported to clients on a weekly basis, offering support across multiple projects. Assisted in resolving client concerns, provided input on developing requested features, and actively participated in quarterly project proposals. Additionally, contributed to state reporting on previously developed features.
  - **Other**: Developed a tool for viewing and editing tree structured Sysrepo data as JSON objects. Looked into other programming languages as *Zig* and *Rust* to provide more support for Sysrepo plugin development. Researched other technologies such as **snabb**.
- **ReversingLabs** — Zagreb, Croatia
  Software Engineer — *Jun 2024 -*
  - **Spectra Detect Development**: Working on Spectra Detect OVA and Kubernetes variants. Developing new features for Spectra Detect Manager such as displaying up to date state of the configuration data, showing mismatched parts of the configuration, writing new libraries for needed Python objects manipulation, writing validators for added configuration data. Microservice development, primarily in Golang, features include querying Spectra Intelligence for previous scans, developing new preprocessor component.
  - **Spectra Detect Kubernetes Deployment**: Porting monolith deployments to split microservices, enabling them to work in Kubernetes. Helm chart development, porting configuration to templated ConfigMap and Secret objects. Research regarding cgroups version 2 due to restrictions. Developing minimal docker images for microservices which pull files from external sources.

Projects

- **dots-and-boxes**: Dots and Boxes game implementation. Uses MinMax algorithm for computer generated moves.
- **lightscript**: Scripting language. Features include dynamic variables, arrays, conditions, loops, functions.
- **Izmjene**: School scheduling system. Developed support for maintaining a schedule and reporting daily changes.
- **breakout**: Breakout game implementation with support for multiple levels.

Programming Skills

- **Languages**: C/C++, Golang, Rust, C#, Java/Kotlin, Python, Javascript/Typescript, PostgreSQL
- **Technologies**: Docker, React, Vue, OpenGL, WPF, Android Studio, Jetpack Compose

Achievements

- Microsoft MTA - Software Development Fundamentals certificate 2018
- Microsoft MTA - Windows Operating System Fundamentals certificate 2018