Dan **Duta**

Software Engineer, Innovation Labs 2021 Finalist

022256, Ciocarliei 24, Bucharest, Romania

(+40) 742-029-011 | danduta23@gmail.com | danduta.github.io/ | danduta | dan-duta

Education

Faculty of Automation and Computers (Politehnica University) — *Bucharest, Romania*

B.S. in Computer Science and Engineering — *Sept. 2018 - PRESENT*

Skills

Advanced C, Java 8+, Linux-based operating systems internals, multi-threaded applications

Intermediate Python (Django, Flask), C++ and STL, TCP/IP stack and networking, JUnit

Other git, Eclipse SDK, SWT, software design, scripting, functional programming, data structures and algorithms

Experience

AMIQ EDA — *Java 8, Eclipse RCP, JUnit, SWT*

R&D Engineer — *July 2020–PRESENT*

- Worked on Eclipse DVT, a **(System)Verilog/VHDL/eLanguage IDE** based on the Eclipse framework.
- As being part of the UX team, I was responsible of addressing **high-priority performance issues** reported by our clients. This led to big improvements in the accuracy and performance of DVT features, including **better hyperlink accuracy based on semantic context**, **context-aware** Design Breadcrumb, improved top file compilation **error checking**, better view performance through **lazy caching and rendering**, more accurate signal tracing etc.
- Improved **overall responsiveness** of the IDE by separating many operations from the main thread, as well as **parallelizing computionally-heavy** actions.
- Frequently met with our clients - hardware design and verification engineers working for **top semiconductor manufacturers** - for debug sessions and feature requests.
- Provided code coverage through **JUnit** tests, utilising both unit and integration testing.

2Space — *C++, Python, InfluxDB*

Fullstack Developer — *October 2019–PRESENT*

- ***Highlights:*** **Finalist** in **Innovation Labs** 2021, competitor at **EuRoC** (European Rocketry Challenge) 2021
- Currently working as part of a team building a **liquid-propellant rocket**.
- Implemented the software platform used for testing the engine on the ground (managing **data acquisition and interpretation**) and the software platform for **engine control and monitoring**, as well as integrating it all in a user-friendly control dashboard.

Mentor Graphics — *C++, bash, Python, Yocto*

Embedded Software Engineering Intern — *July–October 2019*

- Worked on a **SOTA update** solution based on OSTree, aktualizr and OP-TEE for Renesas Salvator-X boards running **Automotive Grade Linux**.
- Implemented a feature capable of updating the **root filesystem and the Linux kernel** and could **flash new firmware on the board**.
- Improved the U-Boot code by patching the default environment to make the bootloader boot the board into OSTree and **integrated the patches in the AGL Yocto build**.
- Provided a backend solution for deploying the updates from the repository **securely**.

Politehnica University of Bucharest

Undergraduate Teaching Assistant — *September 2019–PRESENT*

- **TA** for the Computer Programming and Introduction to Operating Systems courses.
- Held practical laboratories for students where I've helped them get a better grip on the notions presented in the lecture and solve problems in **C/bash**, created and reviewed assignments.

Personal projects — *Python, C++, C, Networking stack*

Click the links!

- Router implementation with ARP/ICMP and forwarding support — Small web app to control the lights
  Messaging system implemented in C++ using TCP sockets — C pre-processor and stdio library implementation
  Presentation website