

URBAN PRAH

Ground segment software developer
Skylabs d.o.o

Poljčane

FERI

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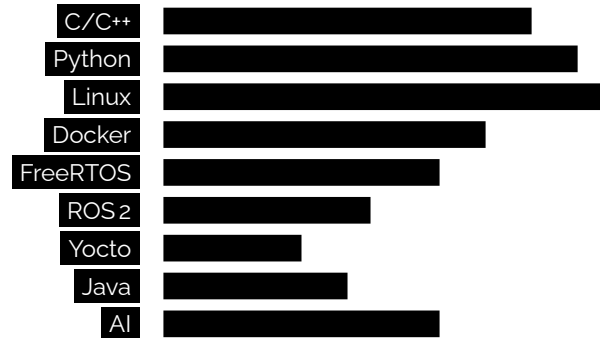
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ABOUT ME

Master's degree candidate at the University of Maribor with a strong focus on precision, organization, and methodical problem-solving. Committed to clean, efficient, and modular work, with a preference for minimalism in both programming and broader workflows. Comfortable in collaborative environments and often take initiative in leadership roles when opportunities arise. Outside of academics, actively involved in sport climbing—initially as a personal pursuit, now expanded to include coaching and routesetting.



Software development

EXPERIENCE

2025 - Present
full-time

Ground segment software development

Skylabs d.o.o

Continuing the work on the SARA project in addition to other ground-segment related tasks for TRISAT and other systems.

2023 - 2025

Robotic systems development - SARA

Skylabs d.o.o

R&D for an unmanned arachnid-shaped space vehicle based on ROS2. Developing the software responsible for remote control and autonomous locomotion. Work includes simulation, system architecture design, RISC-V embedded firmware implementation, reinforcement learning with PPO, etc.

ROS2 / Yocto / IsaacSim / IsaacLab / PPO / RL / pinocchio / Inverse kinematics / PID / Gazebo sim / CAN / RISC-V / Python / C++

2021 - 2022

Embedded development - TRISAT-R

LEIS

Writing and testing firmware for the ADCS and OBC subsystems. Processing on-board sensor data (gyroscopes, sun sensors, magnetometer, GPS) to perform satellite detumbling and reorientation using its magnetorquer actuators. Implementing image capture, logging and task scheduling functionality. [Article](#).

FreeRTOS / C / Python / CAN / UART / SPI

2020 - 2021

Java development

IntechCORE GmbH

Remote work during the pandemic. Project maintenance and refactoring, java-like programming language development. Language self-testing and unit testing.

ANTLR / Java / Testing / Visitor pattern

17.9. - 15.10. 2019
competition

Block chain summer school winner

FERI

Developed a practical solution to a problem of implementing blockchain into a hypothetical MOOC service. Product was a multi-platform mobile app that used blockchain tokens to provide an incentive in form of rewards for users to use the company's online services. [Article](#).

Blockchain / MySQL / NodeJS / REST / React native

2019
competition

</upm

ACM

Finished 21st in the national programming marathon competition with a team two schoolmates. [Results](#).
C++

- 2018 - 2019 **Python development** AVL List GmbH
 Mixed software testing (GUI and unit). Design and implementation of a generic testing tool that reads a given project, recreates it and compares it with the original. Prototyping, creating an OOP model that reflects the project structure, using software's API manipulator functions to simulate a user behavior, error handling, result analysis.
 Python / OOP / Jira / Confluence
- 2017 - 2018 **Software testing** AVL List GmbH
 Automating unit tests with Eggplant scripts. Test running meta-framework, logging system, model creator utility, automated result reporting (CSV log parser), testing work flow, weekly progress reports, meetings, software prototyping, etc.
 Eggplant / Jira / Confluence
- 2015 **Documentation maintenance** AVL List GmbH
 part-time My first work experience. Writing and revising existing documentation for the company's GUI software AVL Boost and AVL Fire.
 Microsoft Word

EDUCATION

- 2022 - Present **Postgraduate studies** University of Maribor
 Continuing studies in the same field, I chose a study module focused on artificial intelligence. This is where I study currently in pursuit of a Master's degree which is a part of my current work on the SARA project, regarding autonomous locomotion based on reinforcement learning.
- H1 2025 **Erazmus+ exchange** Universitat Rovira i Virgili
 Attended a 6 month exchange in Tarragona, Spain where I worked on my thesis and completed a Spanish lesson. I met new people and worked remotely.
- 8.9.2022 **Graduated with a bachelor's degree** University of Maribor
 Finished undergraduate studies at University of Maribor with a bachelor's thesis titled On-board data capture and compression on TRISAT-R nanosatellite. About a year later an image of the Earth was successfully captured and transmitted from the satellite.
- 2018 - 2022 **Undergraduate studies** University of Maribor
 Took classes in Computer Science and Information Technologies.
- 2014 - 2018 **Grammar school** II. gimnazija Maribor
 Attended II. gimnazija Maribor, built a desktop computer from parts and set up a hackintosh system. I was very busy, participating in many extracurricular activities.

🇸🇮 LANGUAGES

Slovenian - native
English - C1
Spanish - A2

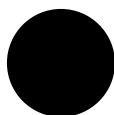
🔧 OTHER SKILLS

Apart from programming I also have intermediate knowledge of creative software for photo and video editing. I am an amateur photographer, can touch type and am an avid Neovim user with an eternal chase for the perfect workflow. Currently using NixOS to set-up a secure interconnected distributed system of personal computers and a VPS for a unified user experience. I have some experience with reverse-engineering and beginner CTF challenges. I'm familiar with LaTeX and Typst, the former of which was used to generate this document.

★ HOBBIES

In my limited free time I like to tinker with microelectronics and tackle random DIY projects like setting up a Raspberry Pi based home entertainment system or a custom smart watch. I like photography, HiFi audio, reading, open source software and philosophy. I also used to help with the local firefighter team. I always wanted to get better at 3D printing and chess.

Climbing



Routesetting



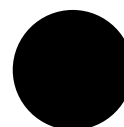
Instructing beginners



Coaching



Working with children



Outdoors

EXPERIENCE

- August 2025 **Volunteered at kanjonfest** **Jurgovo**
Helped building an artificial wall for a climbing festival organized by Flapper climbing.
- 2024 - 2025 **Commercial routesetting** **PCSB, Klajmber**
Introductory and intermediate experience at setting, leading and organization (chief role), setting extremes. One of my boulders.
Bouldering / Comp-style / Creativity / Safety / Movement
- 2022 - 2024 **Coaching** **AKSB**
Training a group of teen climbers three times per week at PCSB.
Routesetting / Exercise / Health / Pedagogy
- 2021 - Present **Trips** **Around the world**
Climbing trips became a core component of my climbing, enabling new experiences in unique environments, meeting new people, aspiring to reach new goals, getting inspired for routesetting, etc. My first was Briançon in 2021, after that many followed, including returning visits to Prilep, Fontainebleau, Magic Wood, Paklenica, Maltatal, Oltre Finale, Arco, Siurana, Margalef, ...
4. 4. 2024 **First 8a route** **Kotečnik**
After getting injured on the route I managed to finish it a year later, excited for more 'difficult' rock climbing.
- Summer 2023 **Outdoor climbing camps** **DEŠ, AKSB**
Hosted two rock climbing summer camps for children. Three days in Kotečnik and another 5 days in Osp.
Safety / Lead climbing / Entertainment / Camping / Pedagogy
30. 4. 2023 **Hardest boulder grade** **Prilep**
I experimented with semi-planned specific training for the first time. It paid off. The week before the trip to Prilep I ascended my first 7c in Lukanja, followed by another during the trip.
11. 8. 2022 **First 7c route** **Boč**
A proud moment, supported by newly made friends.
11. 4. 2022 **Independent sport climber** **PK6B Ptuj**
I briefly joined a club in Ptuj, where I fell in love with the spray wall. During my membership I became recognized as an independent sport climber by KŠP, the same day I climbed my first and second 7b route.
11. 4. 2021 **First 7a route** **Buncove skale**
After about a year of climbing and 2 lock-downs due to Covid-19, I managed to climb a short technical route called Yosemite at the local crag. This represented a mental shift, when I realized the sport might evolve into something more than just a hobby.
- January 2020 **Started climbing** **Klajmber**
I wanted to try something new with a friend. We both quickly became obsessed with the sport, chasing rapid improvement, new techniques, harder climbs, all while having a great time.

EDUCATION

4. 9. 2023 **National routesetting workshop** **KŠP**
workshop
Finished a 3-day routesetting workshop about commercial setting for indoor bouldering.

10. 4. 2023

Certified climbing coach

KŠP

Finished training for VŠP, acquiring theoretical and practical knowledge of teaching movement, training, physical exercise, basics of medicine and anatomy, sport psychology, pedagogy, history of climbing, ethics, rope maneuvers, etc.