

CONTACT

✉ tomas.roun8@gmail.com

☎ +420 604 877 143

🌐 tomasr8

🔗 tomasr.dev

LANGUAGES

Czech Native

English Fluent

Italian Working proficiency

French Beginner

SKILLS

JavaScript/React 5+ yrs

Python 4+ yrs

NodeJS 4+ yrs

AI & Robotics 3+ yrs

Databases 3+ yrs

Git & Gitlab & Github 5+ yrs

Docker & CI/CD 3+ yrs

Technical writing 3+ yrs

TOMÁŠ ROUN

I'm a software engineer with a Master's degree in Computer Science & AI. I'm interested in software, web development, robotics and open source.

WORK EXPERIENCE

Software Engineer

2021 - ongoing

CERN

Currently working on [Indico](#), an open-source event management tool made at CERN. Indico is not just the go-to event management tool at CERN but also at more than 250 institutes around the world including the United Nations, Fermilab and many more.

I am responsible for design, and development of new features across the entire software stack, writing tests and documentation and managing our Docker infrastructure. My role also includes supervising and mentoring other team members and user support.

I lead a sub-project which aims to extend the functionality of Indico as a mobile application (PWA) using modern technologies.

As a part of my work I presented at an Indico workshop jointly organized by CERN and the United Nations.

Tech: Python/Flask, JS/React, Postgres, Docker, Mobile development

Technical Student

2020 - 2021

CERN

I worked on the [CERN AppStore](#) - a modern multi-platform system to distribute applications from a centrally managed store. The system was composed of a website, an Electron application and various background services for both Windows and Linux.

I was responsible for gathering requirements, design and development of features for all of the system components.

Other responsibilities included writing tests and documentation, managing automated installer builds and deploying the website to a Kubernetes cluster.

Tech: NodeJS/Electron/Express, JS/React, Python, Postgres, Docker, C#

Research Intern

2019 - 2020

Smart Urban Mobility

Developed new state-of-the-art algorithms to increase the reliability of Vehicle-sharing Systems combining statistics and discrete optimization techniques. I co-authored a [paper](#) with our results.

Tech: Python/Numpy/Scipy, Linear programming

Research Intern

2019 - 2020

Czech Institute of Informatics

I researched ways of applying machine learning algorithms to speed up NP-Hard combinatorial optimization problems in the field of optimal job scheduling.

Tech: Python/Tensorflow/scikit-learn, Linear programming

HACKATHONS

Porsche Engineering Hackathon

3rd place

Programmed a self-driving RC car to stay within a given path, recognise road signs and safely stop in front of obstacles.

Valeo Hackathon

2nd place

Created a program for automatic 3D scene reconstruction and rendering of objects from LiDAR scans.

eForce Hackathon Organizer

Preparation of a LiDAR-based assignment, evaluation & mentoring participants throughout the hackathon

EDUCATION

Master's Degree in Computer Science & AI Czech Technical University in Prague

2018 - 2021

In my [diploma thesis](#), I implemented an algorithm for autonomous navigation of a self-driving car for the Formula Student Driverless competition in which I competed with a team from my university.

Bachelor's Degree in Computer Science Czech Technical University in Prague

2015 - 2018

Graduated with distinction.

VOLUNTEERING

Formula Student Team Member eForce Driverless

2019 - 2022

Worked on a development of a self-driving racing car for the [Formula Student competition](#). My main work included autonomous navigation (SLAM), computer vision, software development and system design to ensure real-time capabilities. I also prepared technical design documents and reports to be presented to judges during the competition, mentored new members, organized events and hackathons and written articles published on our team website.

Tech: Python/OpenCV/Tensorflow, Stereo cameras, LiDAR & GPS sensors, GPU programming, Robot Operating System

Lecturer

Czech Technical University in Prague

2019

Taught Introduction to programming using Python at a week-long intensive course aimed at first-year university students. I was responsible for course planning, lectures and practical labs.

PUBLICATIONS

Rebalancing in Vehicle-sharing Systems with Service Availability Guarantees

2020

Conference Paper, American Control Conference

This [paper](#) presents a novel stochastic method for guaranteeing vehicle availability in Vehicle-sharing Systems. The paper was a result of my internship at Smart Urban Mobility. The described algorithm significantly outperforms current state-of-the-art techniques.

HOBBIES & OPEN SOURCE

In my spare time, I like to contribute to open source. I mostly contribute to Python projects such as flake8, pyodide and CPython. I also have some programming and electronics projects that I've made on my [website](#). When I'm not programming, I'm most likely to be climbing, reading, cooking or building yet another mechanical keyboard.