

BC. JAKUB RADA

Prague, Czechia · 25/02/2000 · jakubrada@icloud.com · +420 604 730 409 · www.jakubrada.com

SKILLS

Languages: Czech, English, Spanish

Interests: Running, Gym, Learning, Coding, Reading, Hip-Hop music

Programming Languages: C/C++, Python, Julia, Rust, Haskell, Java, Javascript/Typescript, Dart, SQL, HTML/CSS

Application Frameworks: Flutter, Vue.js, Angular, Django, NodeJS

AI/ML Tools: PyTorch, NumPy, scikit-learn, DeepMind Control Suite, Gurobi, PySAT, Jupyter

Skills and Traits: Hardworking, Adaptability, Precision, Quick learner, Attention to Detail, Clean code, Problem solving, Responsibility

EDUCATION

Czech Technical University in Prague **09/2022 - present**
Artificial Intelligence Master

- Master programme following the Bachelor programme with focus on Artificial Intelligence and Machine Learning.

European Summer in Artificial Intelligence **07/2024 - 07/2024**
Artificial Intelligence Master / PhD

- 2nd European Summer School on Artificial Intelligence and 21st Advanced Course on Artificial Intelligence

Korean Advanced Insitute of Science and Technology **02/2023 - 06/2023**
Exchange programme Master

- Exchange programme in South Korea during my first year of Master's studies. Apart from the new things I learned, it gave me plenty of experience into my future life.

Czech Technical University in Prague **06/2019 - 06/2022**
Artificial Intelligence and Computer Science Bachelor

- Bachelor programme consisiting of Math, Algorithms and Computer Architectures and Introduction to Optimization and Artificial Intelligence

Gymnázium, Praha 6, Nad Alejí 1952 **09/2011 - 06/2019**
General Education High School for students aiming to attend a university High School

- One of the best High Schools in the Czech Republic providing great fundamentals in Math, Natural Sciences and Social Sciences

MEMBERSHIPS AND SOCIETIES

Upsilon Pi Epsilon **02/2024**
Honorary Society Lifetime

PUBLICATIONS

The ALNS metaheuristic for the transmission maintenance scheduling **05/2023**
Journal of Metaheuristics / Springer Nature Paper

EXPERIENCE

Web and Mobile Software Development **06/2022 - present**
SWEHQ | Part-time Software Engineering

- Flutter, Dart, Vue.js, Python, Javascript, Typescript, Django, Docker, Android, iOS
- Developing multiple complex mobile and web apps in various languages. Namely, a social mobile app released for both iOS and Android (Joinly), a web app for aggregating and selling holiday tours, a web app for one of Ministries of the Czech Republic and a web app serving as a monitoring system for analogue missions (CommonTongue). Worked on both Frontend and Backend parts.

Web Software Development (Kappka)

SWEHQ | Part-time

06/2021 - 11/2021

Software Engineering

- Angular, Typescript, HTML, CSS, Javascript, NodeJS, Docker
- Development of a complex web application tool for mortgages for a big financial group. I worked on the front-end part of the application using Angular and Typescript.

ROADEF Challenge 2020

CIIRC CTU | Part-time

07/2020 - 06/2021

Researcher and Developer

- C++, C, Python
- Research and development of a solution for an international competition in discrete optimization. The problems were too large to be solved exactly so we had to derive a complex Metaheuristic algorithm to find approximate solutions.

Front End Web Developer

Scalesoft | Part-time

08/2019 - 12/2019

Software Engineering

- CSS, Typescript, HTML, Javascript, NodeJS
- Two-week internship before the first academic year, where I made both determinate and indeterminate progress indicators in pure CSS. This then translated into one semester long part-time job, where I worked on a web app.

PROJECTS

Weighted Feedback Arc Set Problem

Semestral project in Combinatorial Optimization

05/2024 - 05/2024

FEE CTU

- C++

Quantum Simulator (Quantum Circuits)

Project in Quantum Computing

04/2024 - 05/2024

FEE CTU

- C++

Reconstructing 3D objects from a set of 2D images

Semestral project in 3D Computer Vision

09/2023 - 01/2024

FEE CTU

- Python, Matlab

Resume / Personal portfolio webpage

Free-time personal project

09/2023 - 10/2023

Personal

- Vue.js, Typescript, HTML, CSS

Soft Actor-Critic algorithm implementation

Semestral project in Mathematical Foundations of Reinforcement Learning

06/2023 - 06/2023

KAIST

- Python, PyTorch

Implementation of KAIST Educational C Compiler in Rust

Semestral project in Compiler Design

02/2023 - 06/2023

KAIST

- Rust

Developing a novel approach to Dimensionality Reduction using Graphs

Semestral project in Graph Machine Learning and Mining

05/2023 - 06/2023

KAIST

- Python, PyTorch

Double Oracle Algorithm for solving zero-sum normal-form games Semestral project in Julia programming language University course	01/2023 - 02/2023 FEE CTU
<ul style="list-style-type: none"> • Julia 	
Comparing Exploration Methods in Partially Observable Stochastic Games Bachelor Thesis combining Game Theory and Reinforcement Learning	09/2021 - 05/2022 FEE CTU
<ul style="list-style-type: none"> • Julia, LaTeX, Python 	
Evolutionary and Memetic Algorithms Semestral project from Evolutionary Algorithms	09/2021 - 01/2022 FEE CTU
<ul style="list-style-type: none"> • C++, Python, LaTeX 	
Pong game for a microcontroller Semestral project in Computer Architectures	06/2020 - 06/2020 FEE CTU
<ul style="list-style-type: none"> • C 	
Chess Game with GUI and simple artificial player Semestral project in Java	02/2020 - 05/2020 FEE CTU
<ul style="list-style-type: none"> • Java, JavaFX 	
Flashcards web app in Electron Graduation project at High School	02/2019 - 05/2019 GNA
<ul style="list-style-type: none"> • Javascript, HTML, Python, CSS, Django 	
Baltie 3 projects Graphical programming language Baltie 3 to learn C/C++	09/2008 - 09/2012 Extracurricular
<ul style="list-style-type: none"> • Baltie 3 	

ACHIEVEMENTS

Daegu International Half Marathon 2023 10th place	04/2023 - 04/2023 Daegu International Marathon
Soul Marathon 2023 Relay 1st place	03/2023 - 03/2023 Seoul Marathon
Comparing Exploration Methods in Partially Observable Stochastic Games Dean's award for exceptional Bachelor Thesis	06/2022 - 06/2022 FEE CTU
ROADEF Challenge 2020 2nd place in the junior category + paper published in the Journal of Heuristics	06/2021 - 06/2021 EURO
Cambridge First Certificate in English Official B2 level certificate in English	06/2017 - 06/2017 Cambridge English
Baltie 2011 International Round 3rd place	06/2011 - 06/2011 SGP Systems
Baltie 2011 National Round 2nd place	05/2011 - 05/2011 SGP Systems