

Dominik Babić

Rijeka, Croatia

dominik.babic@fer.hr
+385 97 666 0656
github.com/babidom
[LinkedIn](#)
[Kaggle](#)

EDUCATION

KTH Royal Institute of Technology, Sweden

MSc exchange student

Aug 2024 – Jan 2025

- Collaborated on a reproducibility research paper: *An in-depth exploration of Finite Scalar Quantization with VAEs.* ([code and preprint](#))
- Relevant courses: *Deep Learning Advanced, Security in Computer Systems, Reinforcement Learning etc.*

University of Zagreb, Faculty of Electrical Engineering and Computing, Croatia

BSc in Computer Science

Sep 2023 – Present

- Excelled academically, placing in the **top 2%** of students in the generation with a GPA of 4.79/5.0.
- Relevant courses: *Machine Learning, Pattern Recognition, Computer Vision, Deep Learning etc.*

BSc in Computer Science

Sep 2020 – Jul 2023

- Ranked in the **top 5%** of students in the generation with a GPA of 4.54/5.0.
- Bachelor's Thesis **awarded** with the highest grade for the research on: *Vector Quantized Variational Autoencoder - VQVAE.* ([code](#), [paper](#))

Teaching Assistant

Nov 2023 – Present

- Responsibilities includ facilitating exercises, grading assignments, evaluating exams, and mentoring students on over eight courses.

University of Rijeka - Faculty of Engineering, Croatia

Summer School of Image Processing

Jul 2021

- Developed expertise in image processing, computer vision, and machine learning techniques.
- Received the **Best Research Award** for the *Age Recognition* research project which tackled the problem of age estimation and classification by applying advanced computer vision techniques. ([project site](#))

WORK EXPERIENCE

Visual Recognition Group, CTU in Prague, Czech Republic

Deep Learning Research

Mar 2025 – Present

- Conducted research on the topic of *Detection of maliciously crafted image content* and developed a novel method for detecting generated adversarial images with over 90% accuracy rate.

Syskit d.o.o., Zagreb, Croatia

Full-stack developer

Jun 2022 – Aug 2023

- Contributed to the development and maintenance of a SaaS React-based web and Microsoft Teams App.
- Improved the performance of the application by 20% through code optimization and database query tuning.

Visage Technologies, Zagreb, Croatia

Software testing

Sep 2023 – Nov 2023

- Conducted testing and analysis of the Face Recognition SDK to evaluate its performance and reliability, leading to a 15% increase in the SDK's accuracy and speed.

PROJECTS AND COMPETITIONS

Competitions and

- *Lumen Data Science Challenge 2023.* - Constructed an innovative Audio instrument classification solution based on DL models which achieved over 90% accuracy on the multi-instrument dataset.

Hackathons

- *Kaggle competitions.* - Participated in various Kaggle competitions and achieved a 2nd place in the Stock Price Prediction competition. ([competition link](#))
- *Koji Kukac Hackathon 2024.* - Developed an AI-driven parking solution that leverages real-time data to optimize parking management and improve efficiency by 30%.

Projects

- *Hand tracking and Volume control* - Optimized a Python module for tracking hand movements and controlling computer volume. ([code](#))
- *Registration Recognition System* - Developed a system for recognizing vehicle registration plates using OpenCV and Tesseract with an average F-score of 91.3%. ([code](#))

TECHNICAL SKILLS

Intermediate

Java, C, C++, .NET, JavaScript, R, SQL, React, Node.js

Advanced

Pytorch, Keras, Tensorflow, JAX, Flax and Optax, Pandas, NumPy, Matplotlib, Git, Linux

OTHER SKILLS AND INTERESTS

Study Interests

Deep Learning and Computer Vision, Generative modeling, Reinforcement Learning, Optimization, Computer Security, Data Science, Graph Theory, Data Driven Development.

Languages

Croatian (native), English (fluent), Italian (basic), Swedish (basic).