



# Matej Ciglenečki

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Computer Science student who is highly interested in deep learning, computer vision, and data science. Through my academic and work experience, I've developed excellent problem-solving capabilities accompanied by a strong sense of ownership. I'm fascinated by well-written libraries, software modularity, and design principles.

## Experience

Oct 2020 – Oct 2021

- Software Engineer – [Memgraph](#)
- designing SQL database and writing feature specs for Memgraph Cloud's backend
  - implementing Memgraph Cloud's backend (**node.js**, **TypeScript**, **Sequelize**, **postgres**)
  - writing unit and integration tests (**Jest**)
  - setting up **Elastic Stack** on **AWS EC2** to analyze application's logs from **AWS CloudWatch**
  - creating [educational lessons](#) (**Memgraph**, **Cypher**)

July 2020 – Oct 2020

- Software Engineer Intern – [Memgraph](#)
- implementing geographic graph data visualization in Memgraph Lab (**Leaflet**, **vis.js**)
  - refactoring codebase (**TypeScript**, **Angular**)
  - writing a [summary blog post](#)

July 2019 – Aug 2019

- Technical assistant – Conty Plus
- file parsing and data transformations (**Python**)

## Education

2021 – present

**M.Sc Computer Science** – [Faculty of Electrical Engineering and Computing](#), Zagreb  
*relevant courses: Deep Learning, Machine Learning, Statistical Data Analysis, Multivariate Data Analysis, Advanced Algorithms and Data Structures, Technology Entrepreneurship, Mathematical Finance, Business Intelligence*

2017 – 2021

**B.Sc Computer Science** – [Faculty of Electrical Engineering and Computing](#), Zagreb  
*relevant courses: Design Patterns, Databases, Probability and Statistics, Artificial Intelligence, Communication Networks, Network Programming, Fundamentals of Business Information Systems, R language*

2013 – 2017

School of Electrical Engineering, Zagreb

## Skills

data science and statistics  
machine and deep learning  
script languages  
web dev backend  
databases  
web dev frontend  
other skills

**Python**, **numpy**, **pandas**, **matplotlib**, **R**  
**PyTorch**, **scikit-learn**, **torchvision**, **PyTorch Lightning**  
**Python**, **bash**  
**node.js**, **Sequelize**, **TypeScript**, **FastAPI**  
**postgres**, **SQL**, **Memgraph**, **Cypher**  
**React**, **TypeScript**, **HTML**, **CSS**  
**git**, **Linux**, **Docker**, **Elastic Stack**, **C**, **Java**



## Workshops and projects

2022

[LUMEN Data science competition – GeoGuesser AI Agent](#)

- Led a team of 3 and got 2<sup>nd</sup> best model performance. The goal was to predict the location of Google Street View images in Croatia. Geospatial feature engineering, deep learning, and computer vision methods were used to achieve a mean error of 22km, measured as the great-circle distance from the true to a predicted location.
- The final solution included project documentation, technical documentation, and a local server which allowed inference on a trained model.

2022

[AI BattleGround hackaton](#)

- The goal of the hackathon was to create an agent who would play against other agents in a turn-based game. At the beginning of the game, the agent initializes a creature pool, after which the agent decides which action to perform next (*attack*, *switch positions of creatures* or *use an item*) based on the game's state.

2022

[Implementation of driver fatigue detection in an EEG-based system – Data Science course project](#)

- Performed data analysis and feature extraction, trained multiple models, and predicted driver's fatigue with slightly better results compared to the research article.

2021

[Student success analysis – Statistical Data Analysis course project](#)

- Led a team of 4 in the Statistical Data Analysis course project written in R. Analysis methods described in the [final report](#) include t-tests, chi-squared test, Fischer's test, normality tests, f-tests, ANOVA, and linear regression.

2020

Soft skills academy – leadership group

2019, 2018

DataCrunch – data science academy

- predicting bankruptcy of Croatian companies with machine learning techniques in R

2019

AG04 – Spring Boot Summer School

- completed a Java Spring course
- developed a web application with Java Spring in a 2-day hackathon in a group of 5

## Hobbies

Cooking, body-weight exercising, running, reading, photography, learning, side-projects

## Interests

Computer science, software engineering, data science, deep learning, computer vision, machine learning, statistics, competitive programming, finance, leadership, team cohesion, communication, soft skills, personal development, health, privacy, music