

# Fedja Mulabegović

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## Education

- **International Exchange Student, Kantonschule Wohlen, Switzerland (2019):** Participated in the AFS program for a year, gaining international experience and cultural insights, enhancing my academic perspective.
- **Secondary Education, Gymnasium Mesa Selimovic, Tuzla:** Completed with a focus on foundational skills for further computer science studies.
- **Dean's List Honoree, Faculty of Computer Science and Biomedical Engineering, TU Graz:** Recognized for outstanding academic performance in the Computer Science program, ranking in the top 50% of all students in the fourth semester. This accolade reflects a commitment to academic excellence and mastery in the field, as determined by the faculty's rigorous evaluation criteria.
- **Upcoming Fifth Semester, TU Graz:** I am currently heading into my fifth semester in the Computer Science program, continuing to build upon my academic foundation and expertise in the field.

## Projects

### AI Client for Server-Based Game - Object-Oriented Programming 1

*TU Graz, Nov 2022 - Jan 2023*

Engineered an AI client in C++ as part of a team, enabling efficient interaction with a game server using client-server architecture. Integrated real-time communication with the server using `net::Client`, focusing on network protocol adherence and message parsing. Implemented AI algorithms to process game states and make strategic decisions, demonstrating skills in C++ programming and algorithmic thinking. Designed the client for robust performance, including handling end-game scenarios, which refined problem-solving and software development skills.

*Programming Language: C++*

### Geospatial Data Processing Project - Object-Oriented Programming 2

*TU Graz, Nov 2023 – Jan 2024*

Collaborated in a team at the university to develop a geospatial data processing application, gaining a solid understanding of Spring Boot and client-server communication. Contributed to server-side development, focusing on data parsing and management using Spring Boot, which underpinned the project's core functionality. Actively participated in designing and implementing communication protocols to handle geospatial data, enhancing my knowledge of data serialization and RPC mechanisms. The project provided a hands-on experience with the basics of geospatial data processing, demonstrating the practical application of theoretical concepts in a real-world-like scenario.

*Programming Language: Java*

## Merge Sort Algorithm Implementation Project - Data Structures 1

TU Graz, Nov 2023 - Dec 2023

Developed a merge sort algorithm in Python, deepening my understanding of algorithm design and time complexity analysis. Focused on optimizing the algorithm for efficiency, gaining insights into the practical applications of sorting algorithms in software development.

*Programming Language: Python*

## Skills

### Programming Languages:

- Proficient in Java, C, C++, and Python.
- Familiar with Assembly, SQL, and System Verilog.

### Development Tools:

- Experienced in using Docker, PostgreSQL, GTK Wave, and Scripting.

### Operating Systems:

- **Ubuntu:** Proficient in Ubuntu Linux environment, including system administration, shell scripting, and software management.
- **Windows:** Experienced in Windows operating systems, familiar with its administration, configuration, and troubleshooting.
- **macOS:** Competent with macOS environment, knowledgeable in its use, maintenance, and integration with other Apple products and services.

### Frameworks:

- Proficient:
  - Developing applications using Spring Boot and Maven.
  - Web development with React.
  - Machine learning applications with PyTorch.

### Soft Skills:

- Strong observational and analytical abilities.
- Effective at providing constructive feedback.
- Proficient in prioritizing tasks and maintaining accountability in team settings.

## Languages

German: Fluent proficiency in speaking and writing, C1 certification.

English: Fluent proficiency in speaking and writing.

BKS (Bosnian/Croatian/Serbian): Native proficiency in speaking and writing.