

# Aleksa Vukadinović

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## EDUCATION

### Faculty of Mathematics, University of Belgrade

Oct. 2022 – Present

*B.S. Computer Science*

*Faculty of Mathematics, Belgrade*

- **Courses:** Algorithms and Data Structures, Construction and Analysis of Algorithms, Computer Graphics, Introduction to Web and Internet technologies, Interpretator design, and many more...
- **Interests:** Algorithms and Data Structures, Computer Graphics, AI, Compilers & Interpreters

## ABOUT ME

- I am a third-year Computer Science student with a strong interest in algorithms, computer graphics, and artificial intelligence. I enjoy participating in hackathons and programming competitions, where I apply my technical skills in creative and challenging ways. Currently working as a Full-Stack Developer I am constantly seeking opportunities to learn and improve.

## TECHNICAL SKILLS

**Programming Languages:** C/C++, JavaScript, TypeScript, Python, Java, C#

**Web Technologies:** React, Next.js, Node.js, Fastify, HTML, CSS

**Tools & Technologies:** OpenGL, MongoDB, SQL, Docker, Git, Github, Linux, LaTeX, Postman

**Languages:** Serbian, English, Italian

## EXPERIENCE

### Full-Stack Developer Intern

Feb 2025 – Present

*Novet.ai*

*Belgrade, Serbia*

- Develop and maintain scalable back-end systems using Node.js, Fastify, and PostgreSQL
- Collaborate with the front-end team to integrate APIs and services with React and Next.js
- Implement database schemas and optimize queries for improved performance
- Participate in code reviews and contribute to architectural decisions
- Work with Docker for containerization and deployment of applications and services
- Developed and dockerized an online service leveraging neural networks for language tokenization

## PROJECTS

### DigitEye | AI neural network for image recognition

Nov. 2024

- \* Python neural network based on **TensorFlow** and **Keras** trained on the MNIST dataset for recognizing handwritten digits.
- \* Neural network can successfully identify the digit in 90% of the cases, also supports custom parameters, such as number of layers, epochs, etc.

### Volley of Rockets in a Tornado | Python simulation

Jun. 2024

- \* Collaborated with a team of 2 and developed a fully functional simulation in **Python** simulating trajectories of projectiles launched at a tornado with varying angles and velocities.
- \* Project was done as a part of Introduction to Mechanics course in second year

### Starfall Shores | Computer Graphics course project

Jan 2025

- \* Created a visually rich real-time rendering scene using **C++**, **OpenGL** and a **custom-built engine**
- \* Wrote custom **GLSL shaders** for lighting, materials, and post-processing effects
- \* Implemented advanced graphics techniques such as **instanced rendering** for performance optimization and **bloom** for enhanced visual fidelity

### AmbroAI | AI model for predicting number of allergic reactions in population

Sep 2024

- \* Developed an AI model based on linear regression in **Python** to predict the number of people likely to have an allergic reaction, based on geographic location and population size.
- \* This project was developed during 'The Great Hacka' hackathon.