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

TECHNICAL SKILLS

Programming Languages: C/C++, JavaScript, TypeScript, Python, Java, C#, Haskell
Web Technologies: React, Next.js, Node.js, Fastify, HTML, CSS
Tools & Technologies: OpenGL, PostgreSQL, MongoDB, Docker, Git, Linux, LaTeX, Postman
Languages: Serbian, English, Italian

EXPERIENCE

Full-Stack Developer Intern Feb 2025 – Apr 2025

Novet.ai *Belgrade, Serbia*

- Developed internal tooling dashboards in **TypeScript**, **React**, and **Next.js** to visualize customer product usage with multiple filters (time ranges, company, events, etc.)
- Built tools for client management including trial extensions, invite systems, and analytics for both customers and internal teams
- Designed and implemented a **redlining algorithm** enabling AI-powered document corrections by diffing and grouping text edits
- Collaborated with product and design teams to improve internal workflows and data-driven decision making

Junior Full-Stack Developer Apr 2025 – Aug 2025

Novet.ai *Belgrade, Serbia*

- Developed production-level features in **TypeScript** and **React** for company's website and main product UI
- Built and optimized REST APIs in **TypeScript** (**Fastify**) and a microservice in **Python** (**Flask**)
- Designed and optimized complex SQL queries, performed database migrations, and improved backend performance
- Forked and customized open-source libraries from GitHub to fit company requirements
- Contributed to architecture discussions, code reviews, and deployment pipelines

PROJECTS

Starfall Shores | *Computer Graphics course project* Jun 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
- Implemented a dynamic day/night cycle with smooth real-time transitions in **C++/OpenGL**

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

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.