Andrei-Alexandru Amzu

RO Citizen | andreiamzu@yahoo.com | +40773720539| LinkedIn: Amzu Andrei-Alexandru | GitHub: AlsoKnownAs-Ax

EXPERIENCE

AQI Travel Maastricht, Netherlands

Full Stack Developer Intern

Nov 2024 - Present

- Developed a B2B dashboard using Svelte and SvelteKit (frontend) and Python (backend), enabling businesses to
 efficiently manage settings, revenue, and analytics, significantly enhancing operational efficiency.
- Ensured robust **authentication** and **security** with a streamlined **login/registration workflow**, integrating backend authentication using **Python** and frontend validation using **Zod**.
- Built a **subscription-based permission system** integrated seamlessly with **backend** APIs and frontend interfaces, ensuring **secure** access management.
- Created an admin approval system, including automated email notifications upon account setup completion, accelerating user onboarding and approval times.
- Designed and developed features such as **real-time analytics**, **revenue tracking**, and **reward management**, which increased financial transparency and enhanced user engagement by **40**%.

Volunteer / Freelancer Constanta, Romania

FiveM Script Developer

May 2022 - Sep 2024

- Developed complex systems for FiveM servers using Lua 5.1, integrating custom gameplay features and optimizing server-side logic, resulting in a 20-30% reduction in server resource consumption for over 100 online players.
- Built responsive front-end and back-end UI components using HTML, CSS, SCSS, JavaScript, and frameworks like Vue.js and jQuery.
- Implemented SQL statements and caching methods to optimize server-side operations, decreasing the need for querying executions by 50%.
- Developed **Anti-dump and security checks** to protect servers against various cheats, significantly improving server stability and my understanding of security's importance.
- Learned to **read and navigate extensive documentation** and gained an appreciation for the value of **well-written documentation** to streamline development and troubleshooting.

PROJECTS

Movie Trailer Streaming Website

Maastricht, Netherlands

Developer

Jan 2024 – Feb 2024

- Built a **movie trailer streaming platform** utilizing the **IMDB API** to dynamically fetch real-time data on the latest movie releases.
- Developed the project using Next.js, TypeScript, and Tailwind CSS, resulting in a highly responsive and visually engaging user experience.
- Deployed the website for live preview, making it accessible to users online, highlighting full deployment and production-level experience.

GPS Navigation Application

Team Member

Jan 2024 – June 2024

- Worked collaboratively with a team of 6 to design and develop a faculty-led GPS navigation application using **Java** and **Mayon**
- Implemented the A* pathfinding algorithm to enable efficient route planning for walking, biking, and driving modes.
- Contributed to a real-world application, demonstrating advanced problem-solving and **algorithm implementation skills** in a team environment.

Knapsack Solver with DLX Algorithm

Team Member

Maastricht, Netherlands

Sep 2023 – Dec 2023

- Participated in a faculty-led project to build a Knapsack Solver utilizing the Dancing Links (DLX) algorithm.
- Implemented an efficient solution for arranging various **pentominoes** to fit within a given container, optimizing the **value-space ratio** for maximum efficiency.
- Designed the algorithm to find optimal configurations and placement strategies, demonstrating strong problem-solving skills and advanced algorithmic design.

For a complete list of my projects, visit my GitHub portfolio.

ACTIVITIES AND LEADERSHIP

Maastricht's Faculty of Science and Engineering

Mentor for first-year students

Maastricht, Netherlands

Sep 2024 - Current

SKILLS

Programming: Java, Python, JavaScript, TypeScript, HTML/CSS, SCSS, SQL, C#, Lua 5.1

Tools & Frameworks: Git, Tailwind, Maven, Next.js, jQuery, FastAPI, Pydantic, Svelte, SvelteKit, Vue, React, Node, SQLite, hey-API, Zod, NPM, UV Python, SQLModel

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Technologies & Concepts: A* Pathfinding, DLX Algorithm, Front-end & Back-end Development, API Integration, Security

Checks, UI Design, Documentation

EDUCATION

Maastricht University

Maastricht, Netherlands

B.S. in Computer Science

- o **Concentrations:** Software Engineering, Web Development (Front-end and Back-end)
- Related Coursework: Data Structures & Algorithms, Algorithmic Design, Computer Networks, Intelligent User Interfaces, AI & Machine Learning, Databases, Artificial Intelligence, Object-Oriented Programming & Modelling, Statistics & Calculus, Principles of Programming languages, Computer Security, Parallel Programming, Embedded Programming