# Andrei-Alexandru Amzu

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#### **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.

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 Maastricht, Netherlands

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 Maven.
- 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**

Maastricht, Netherlands

Team Member

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, Stripe

**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