

# Alex Costea

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## EXPERIENCE

### Software Engineer II

Apr 2024 – Sep 2024

*SAP, Full-time*

*Bucharest, Romania*

- Lead the development of an internal hardware sourcing app, including various user roles and automated workflows based on business requirements, thus streamlining the tracking of resources and reducing costs significantly
- Developed an internal terminal tool to streamline the process of compiling, building and deploying Commerce Cloud instances using Python and Unix Shell, thus reducing developer time spent on manual tasks

### Software Engineer I

July 2022 – Mar 2024

*SAP, Full-time*

*Bucharest, Romania*

- Lead the development of an AI Assistant using OpenAI services, developed with TypeScript and CSS in the front-end and Python and Flask in the back-end, which is estimated to reduce costs by 1.8 million dollars per year
- Implemented new features for a Commerce Cloud project using TypeScript, Angular and CSS, such as integrating HTTP services, creating components and handling localization for a 2 billion dollars per year revenue company
- Developed new data isolation features which allowed a multi-server system to migrate to a single server solution while avoiding data being wrongly exposed for a company with a yearly revenue of 20 billion dollars
- Developed solutions for numerous Java, Spring and SQL back-end issues, as well as JavaScript, TypeScript, JQuery and Angular front-end issues, within SAP Commerce Cloud systems for multiple multi-national clients
- Provided mentorship to 4 co-workers in successfully passing the Oracle Certified Associate Java Exam, as well as in their integration within projects, thus contributing to their success within the company

### Data Analyst

September 2018

*CEREFREA Villa Noël, Internship*

*Bucharest, Romania*

- Crawled the web and scraped online articles from extremist websites, in order to facilitate their analysis
- Performed statistical and natural language analysis of the collected data using the NLTK library in Python

## EDUCATION

### University of Amsterdam

Amsterdam, Netherlands

*Bachelor of Science in Sociology. GPA: 7.75 (US equivalent: A)*

*September 2019 – August 2022*

- Wrote Bachelor's thesis on the correlation between centrality methods and social influence, with data collected from social media and statistically analysed using Python and SPSS
- Completed courses in Introduction to Statistics and Advanced Statistics

## PROJECTS

### Wiles (programming language, online code editor and interpreter)

August 2022 – Present

- Designed the specifications for a programming language, supporting features such as conditional statements, loops, basic data types, first-class functions, generics, sum types, hash maps, pattern matching and type inference
- Implemented the software architecture to parse and the input code into an Abstract Syntax Tree, as well as to check the input code for correctness and type safety and to infer unspecified type definitions
- Created an interpreter which executes the commands corresponding to the type-checked syntax tree
- Developed a Java and Spring Web based back-end for the online interpreter, which can receive REST API calls with Wiles code to execute and return the output, with support for concurrent calls
- Built a front-end which allows users to interact with the Wiles interpreter online as well as locally, including a syntax and error highlighter, developed using TypeScript, React, CSS and Next.js
- Developed solutions to ensure the security of the application and mitigate vulnerabilities such as CORS, XSRF, and insecure HTTP requests
- Deployed the application online using Amazon Web Services, using Unix Shell scripts to automate all steps the building, linking and deploying procedure
- Wrote extensive tests to thoroughly validate the application, achieving 90%+ test coverage for the interpreter

## TECHNICAL SKILLS

**Languages:** Java (Oracle Certified Associate), Python, Kotlin, JavaScript, TypeScript, HTML, CSS, Shell, SPSS

**Frameworks and Libraries:** React, Angular, Spring, Spring Boot, Flask, Node.js, JUnit, NLTK, JQuery

**Developer Tools:** Git, Docker, Amazon Web Services, VS Code, IntelliJ, Apache Ant, Maven, Postman, Kubernetes

**Technologies:** Apache Tomcat, JSON, SQL, Azure, AWS, REST APIs, HTTP, Regex, Ajax, Windows, Linux, Mac