

# Alex Costea

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## EXPERIENCE

### Software Engineer

July 2022 – Present

*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
- Lead the development of an internal Hardware Sourcing app, built on top of SAP Commerce Cloud using Java and Spring, that is poised to make the tracking of resources more efficient and reduce costs significantly.
- 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 (language & online interpreter) | *Kotlin, Java, TypeScript, React, AWS*

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
- Developed the software architecture for the language's interpreter using design patterns in order to optimize for code reuse, maintainability and performance
- Implemented algorithms to parse 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
- Built a web app which allows users to interact with the Wiles interpreter online, developed using TypeScript, React and Next.js for the front-end and Java and Spring Web for the back-end. Deployed the web app using AWS.
- Wrote extensive tests to thoroughly test the application for correctness, achieving 90%+ test coverage

### Greatest Hits! (music charts simulator) | *Java, JavaScript, AWS, Spring, Thymeleaf*

2020 – Present

- Designed a realistic music charts mathematical model in order to simulate the progression of songs' success
- Persisted charts data using a custom JSON-based data format
- Implemented a REST API using Spring Web and Thymeleaf for access to songs, artists and chart history
- Developed front-end functionality corresponding to the REST API's features using JavaScript and CSS
- Configured Apache Tomcat server and deployed the application to Amazon Web Services

## TECHNICAL SKILLS

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

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

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

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