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 (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
- 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
- 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, developed using TypeScript, React, CSS and Next.js
- Created Shell scripts in order to automate the integration of the front-end and the back-end, as well as the process of deploying the application either online or locally
- 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, specifically using the Lightsail service
- Wrote extensive tests to thoroughly test the application for correctness, achieving 90%+ test coverage for the interpreter

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