

# Alex Costea

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## EXPERIENCE

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### Software Engineer

July 2022 – Present

*SAP Romania*

*Bucharest, Romania*

- Developed new data isolation features for the SAP Commerce Cloud system, which allowed a client's multi-server system to migrate to a single server solution without any data being wrongly exposed
- Debugged and developed solutions for numerous Java, Spring and SQL back-end issues within an SAP Commerce Cloud system for multi-national client, which significantly sped up development time
- Designed solutions for major JavaScript and JQuery front-end issues, as such unblocking basic functionality such as registering a new account and placing an order
- Initialized, configured, fixed SQL issues and deployed SAP Commerce Cloud systems for multi-national client, to be used as a starting point for their e-commerce project
- Provided mentorship to co-workers for taking the Oracle Certified Associate Java exam, thus contributing to their success in their certifications
- Rigorously tested custom software developed for Commerce Cloud solutions by myself and co-workers in order to ensure its correctness

### Internship

September 2018

*CEREFREA Villa Noël*

*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

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### University of Amsterdam

Amsterdam, Netherlands

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

*September 2019 – August 2022*

- Completed courses in Introduction to Statistics and Advanced Statistics
- Wrote Bachelor's thesis on the correlation between centrality methods and social influence
- Collected Twitter data using the Twitter REST API and the Tweepy library in Python
- Created graph data structure based on collected data using the NetworkX library
- Performed a thorough statistical analysis of the graph structure using SPSS

## PROJECTS

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### Wiles (programming language & interpreter) | *Kotlin, Java, Maven, Git*

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, 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
- Wrote extensive unit tests to thoroughly test the application for correctness, achieving 90%+ test coverage

### Greatest Hits! (music charts simulator) | *Java, JavaScript, AWS, Spring Boot, 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 using and deployed the application to Amazon Web Services

## TECHNICAL SKILLS

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**Languages:** Java (Oracle Certified Associate), Python, C/C++, Kotlin, C#, JavaScript, HTML/CSS, SPSS

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

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

**Technologies:** Apache Tomcat, JSON, SQL (MySQL), AWS, REST APIs, Regex, Windows/Linux/Mac