

ALEX C. ZAHARIA

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EDUCATION

California Polytechnic State University - San Luis Obispo (Cal Poly)

Bachelor of Science in Computer Science, Expected: Fall 2024

Universidad Carlos III - Madrid, Spain

Study Abroad, Fall 2022

SKILLS

Programming: C, Java, Python, Swift, Git, Unix, HTML, CSS, Javascript, React, REST, OpenAI, RISC-V, ARM, LC3

Data: Apache Spark (PySpark), RDD, SQL, Firebase, Apache Hadoop, MapReduce, Pandas, R

Languages: English, Romanian, Spanish

EXPERIENCE

Computer Science Tutor at Grade Potential

June 2023 - Present

- Demonstrating leadership, adaptability, and interpersonal skills by mentoring students to reach their academic computer science goals
- Designing lesson plans, study materials, and hands-on projects tailored to individual students' needs and learning styles, focusing on Java and Python, data analysis in SQL, Pandas, and R, and hardware

Software Engineer Intern at 206 Realty

June 2022 - August 2022

- Developed a Python tool for aggregating and analyzing client data, generating data driven recommendations for prioritizing client leads
- Integrated data from internal databases and Excel spreadsheets to find all potential clients
- Designed a prioritization algorithm that ranked client leads based on conversion likelihood

PROJECTS

Information Retrieval

February 2024 - April 2024

- Developed a Python-based document retrieval system utilizing TF-IDF and cosine similarity to accurately rank documents by relevance to queries
- Enhanced data handling with advanced text preprocessing techniques, including tokenization and stopword removal, ensuring efficient and precise information retrieval

Jamba Juice Database Model

February 2024 - April 2024

- Designed a SQL database schema for Jamba Juice by outlining business needs, designing an Entity/Relationship UML model, and transforming it into SQL DDL
- Enhanced database integrity through schema refinement, lossless decomposition, and constraint preservation based on functional dependencies
- Leveraged Java Persistence API (JPA) for object-relational mapping to MySQL, and crafted queries addressing defined information needs

Haggle

January 2024 - Present

- Full stack React development utilizing Agile Sprint processes on a team of five to create a student-oriented online marketplace
- Developing with React, Material-UI, React Router, Axios, JWT for the frontend, and Node.js, Express.js, SQL, Supabase for the backend, with Adobe Illustrator and Photoshop for design

GridIron GPT

September 2023 - Present

- Full stack iOS development using Swift, OpenAI, SQL, and Firebase
- Leveraged the OpenAI API to build a dynamic search engine for football stats in a SQL database
- Developing a database caching system, improving query response efficiency

2023 Fantasy Football Quarterback Analysis

June 2023 - August 2023

- Developed ETL processes using Apache Spark, Dataframes, and SQL to analyze over 114,000 lines of weekly NFL player data from 1990 to 2022
- Implemented data pipelines to evaluate quarterbacks' fantasy football production, individual performance considering team dynamics, and to categorize quarterbacks in a tier list