

# ALEX C. ZAHARIA

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## EDUCATION

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

September 2020 - June 2024

Bachelor of Science in Computer Science, Major GPA: 3.1

### Universidad Carlos III - Madrid, Spain

September 2022 - December 2022

Study Abroad, Fall 2022, GPA: 3.6

## SKILLS

**Soft:** Leadership, Entrepreneurship, Adaptability, Communication, Problem-Solving, Creativity, Organization

**Programming Languages:** Python, Java, C, JavaScript, HTML, CSS, RISC-V, ARM, LC3

**Database:** SQL (MySQL, SQLite3, PostgreSQL), NoSQL (MongoDB, DynamoDB)

**ML/Data Science:** scikit-learn, NumPy, Pandas, matplotlib, Apache Spark (PySpark), Hadoop, MapReduce, RDD

**Software Engineering:** OOP, Agile, CI/CD, Unit Testing (Jest, TDD), Figma, UML, Azure

**Tools & Platforms:** Git, Unix, Google Cloud, AWS, Supabase, Firebase, VS Code, IntelliJ IDEA, Eclipse, PyCharm

## WORK EXPERIENCE

### Computer Science Tutor at *Grade Potential*

June 2023 - Present

Mentored over 30 students to reach their academic computer science goals

- Designed personalized lesson plans, study material, and hands-on projects for Java, Python, SQL & hardware

### Software Engineer Intern at *206 Realty*

June 2022 - August 2022

Developed a Python tool to prioritize client leads, increased client conversion efficiency rate by 22%

- Pre-processed and merged over 50,000 rows of potential client data from internal databases into CSV format
- Designed an algorithm to prioritize client leads based on conversion likelihood
- Integrated the process into the employees daily workflow and monitored performance to ensure effectivity

## PROJECTS

### GridIron GPT, *Individual Project*

September 2023 - Present

Developing a NFL Fantasy Football platform in React

- Created a data pipeline to scrape, clean, and aggregate over 300,000 rows of NFL data from 10+ sources
- Designed a UML diagram and developed Supabase database to manage user and NFL data
- Built a Natural Language Processing tool using the OpenAI API to transform user queries into SQL
- Fine-tuned ML models using scikit-learn to generate weekly projections and analyze matchups
- Engineered data visualization components to display rankings and stats

### Haggle, *Group Project*, Cal Poly

January 2024 - June 2024

Led efforts in a team of 5 to create an online marketplace for members of the SLO community

- Maintained a detailed product backlog, developed high priority user stories, personas, and documentation
- Designed UML and Figma models for planning frontend/backend designs
- Handled user authentication (login, sign-up, password management), integrating OAuth and nodemailer
- Leveraged TalkJS API for developing chat features (chat rooms and inbox), allowing users to communicate
- Implemented unit testing with Jest, TDD, and managed CI/CD pipelines for Azure deployment

### Predictive Modeling Tool for Real Estate Prices (In the USA), *Group Project*, Cal Poly

June 2024

Developed a ML tool to predict U.S. home prices and evaluate performance of models

- Pre-processed real estate data from Kaggle and conducted Exploratory Data Analysis (EDA)
- Evaluated multiple ML models (Linear Regression, Decision Trees, Random Forest, Gradient Boosting) using RMSE and CV scores to identify the most accurate, yet time effective model
- Implemented hyperparameter tuning and CV using GridSearchCV, increasing model accuracy up to 63%
- Integrated the predictive tool into a user-friendly interface, providing real-time price predictions