

# ALEX C. ZAHARIA

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## EDUCATION

### California Polytechnic State University - San Luis Obispo

Bachelor of Science in Computer Science

September 2020 - September 2024

### Universidad Carlos III - Madrid, Spain

Study Abroad, Fall 2022

September 2022 - December 2022

## SKILLS

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

**Programming Languages:** Python, Java, C, JavaScript, HTML, CSS

**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:** Github, Unix, Google Cloud, AWS, Supabase, Firebase, VS Code, IntelliJ IDEA, Eclipse, PyCharm

## WORK EXPERIENCE

### Computer Science Tutor at *Grade Potential*

June 2023 - Present

- Empowered over 30 students to reach their academic computer science goals
- Personalized lesson plans, study material, and hands-on projects for Java, Python, SQL and web development

### Software Engineer/Real Estate Sales Intern at *206 Realty*

June 2022 - August 2022

- Collaborated with my manager to fully redesign the internal database and data collection processes
- Analyzed historical conversion trends to identify key factors for successful client acquisition
- Developed a lead prioritization tool in Python, **boosting lead conversion rate by 28%**
- Cold called over 2,000 prospects and set up high-priority leads for my manager

## PROJECTS

### GridIron GPT, *Individual Project*

September 2023 - Present

- Spearheading the development of a NFL Fantasy Football platform using React
- Automated a data pipeline to scrape, clean, and aggregate over 10+ NFL-related sources on a daily basis
- Architected a UML diagram and Supabase database to manage over 300,000 entries of user and NFL data
- Leveraged the OpenAI API to build a dynamic search tool, transforming user queries into PostgreSQL
- Utilized React and PostgreSQL to design intuitive frontend components for displaying performance analytics
- Optimizing ML models using scikit-learn to generate projections and analyze matchups

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

January 2024 - June 2024

- Collaborated in a cross-functional team of 5 to create an online marketplace for the SLO community
- Developed high priority user stories, personas, and a detailed product backlog using Github
- 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
- Increased models' accuracy up to 63% by implementing hyperparameter tuning and CV using GridSearchCV
- Integrated the predictive tool into a user-friendly interface, providing real-time price predictions