

Alan Hong

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EDUCATION

University of Pennsylvania, Philadelphia, PA

Candidate for Bachelor of Science in Engineering

Major: Artificial Intelligence

WORK EXPERIENCE

Bidsquare | *Junior Developer*, New York City, NY

May 2024 – March 2025

- Enhanced the website's backend by integrating the Google Gemini API for autocategorization of items based on images and descriptions, streamlining the workflow for 2,000,000 auction items.
- Leverages the Google Gemini API to obtain accurate shipping information, optimizing logistics and reducing manual input.
- Assisted in the design, development, and maintenance of web applications, ensuring responsive and user-friendly interfaces.
- Collaborated with senior developers to debug and troubleshoot software issues, contributing to higher code quality and system reliability.
- Participated in code reviews, gaining feedback and improving coding skills while contributing to the overall quality of the codebase.
- Assisted in database management tasks, including writing and optimizing SQL queries, managing migrations, and performing basic database administration.

Engineering Summer Academy at Penn | *Teaching Assistant/Resident Advisor*, Philadelphia, PA

July 2023

- Used CS technical background to train 60 students in software development and data analysis, and assisted professor in instructional efforts.
- Led initiatives to collaborate with professors and other TAs to provide additional detailed resources and course materials such as rubrics, autograders, and datasets.

Go Learning Center | *Teaching Assistant/Tutor*, Blue Bell, PA

July 2022 – Aug 2022

- Partnered with teachers to implement lessons in mathematics tailored to 70 students.

PROJECTS

Android Malware Classification Project

April 2024 – May 2024

- Collaborate with a team to analyze and classify Android malware, utilizing the UNB AndMal2020 dataset with about 400,000 instances and 9,500 features.
- Engineer and fine-tune a multi-class classifier, significantly enhancing the model's ability to differentiate between malware types and detect benign vs. malicious applications.
- Implement advanced data preprocessing and dimensionality reduction strategies, such as PCA, to mitigate overfitting and optimize algorithm performance.
- Develop and evaluate models using logistic regression, Random Forest, and XGBoost, integrating SMOTE to effectively manage severe class imbalances.

PowerNotes Mobile App

Sep 2023 – Dec 2023

- Utilize React Native to build a seamless, native user experience for Android devices.
- Implement backend solutions using Node.js and Ruby to manage data transactions and server-side logic efficiently.

SKILLS

Languages: Java, Python, PHP, SQL, HTML, R, Javascript, OCaml, Bash

Frameworks/Libraries: Phalcon, Jsoup, JUnit, Pandas, SciPy, NumPy, PyTorch, Scikit-learn, Matplotlib, Apache Spark, Apache Kafka, React, Langchain.js

Tools/Technologies: Node.js, Yarn, IntelliJ IDEA, Eclipse, VS Code, Android Studio, Docker, AWS (EC2, S3, DynamoDB), OpenAI API, Google Gemini API