

Kieran Khan

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EDUCATION

University of Maryland, College Park

B.S. Computer Science and Statistics - GPA: 3.7

- Dean's List and President's Scholarship Awardee

College Park, MD

Expected December 2025

TECHNICAL SKILLS

Languages: Java, Javascript, Python, Typescript, C, R, C#, HTML/CSS, OCaml, Rust

Technologies: Git/Github, SQL, ReactJS, Node.js, LangChain, OpenAI, Pandas, Numpy, TailwindCSS, Scikit-learn, SciPy, Unity, SpringBoot, RESTful API, FAISS, Streamlit, Register360, LangSmith

Certifications: Oracle Certified Associate–Java SE 8 Programmer

EXPERIENCE

U.S. News & World Report

January 2024 – May 2024

Software Engineer

College Park, MD

- Collaboratively developed an internal quality assurance application through App Dev Club for efficiently managing and validating School ranking data.
- Utilized **React** with **TypeScript** for building a robust frontend UI, and implemented **TanStack** query to fetch and cache data from a relational **PostgreSQL** database. Presented the project at U.S. News Headquarters.

iCode School

May 2023 – August 2023

Instructor

Vienna, VA

- Taught programming to K-12 students, including **Java**, **C#**, and **Python**. Guided students in applying these concepts to Unity, MCreator, Construct3, and Scratch

RPG Squarefoot Solutions

June 2022 – August 2022

Reality Capture Intern

Arlington, VA

- Utilized construction-grade scanners to generate a point cloud of the interior and exterior of structures.
- Conducted post-processing of the point cloud using **Register360** which included validating and linking scans, trimming artifacts, and managing files for the customer.

PROJECTS

TestudoAI | <https://github.com/kierankhan/TestudoAI> | Personal Project

August 2023

- TestudoAI is an AutoGPT App where users can ask nuanced questions regarding the University of Maryland's course and professor reviews database.
- Built Custom Tools from scratch to leverage the umd.io and PlanetTerp API's. Performed prompt engineering to allow the Agent to correctly parse user requests. Implemented **Conversational Memory** to have the Agent remember context and past interactions.
- Utilized **Embeddings**, **Vector Stores**, and **FAISS Similarity Search** to allow the Agent to reference large review data that exceeds the GPT-3.5 token limit.

Technologies: Python, LangChain, LangSmith, OpenAI, Streamlit, Vector Stores, FAISS, Matplotlib

WillHeSave | <https://github.com/kierankhan/WillHeSave> | Personal Project

February 2024

- WillHeSave is a machine learning project built to predict whether a user will save a song to their Spotify library.
- Performed audio feature extraction using Spotify's API. Built custom functions using the Spotipy library to turn playlist links into a labeled **Pandas** dataframe. Set up a 10-fold cross validation train-test split.
- Executed supervised learning by analyzing the performance of five different classification algorithms with **Sklearn**, optimizing for **precision**. Used **Seaborn** to make a covariance heatmap of features.

Technologies: Pandas, Sklearn, NumPy, Seaborn, Spotipy, Jupyter Notebook

COMMUNITY & LEADERSHIP

Diamondback Innovators | <https://diamondbackinnovators.org/>

January 2024 – Present

Officer/Webmaster

College Park, MD

- Developed the website for Diamondback Innovators, a student-run engineering consulting club.
- Built with Next.js on React, used TailwindCSS as the styling framework, and hosted with Vercel.

Gamer Symphony Orchestra

February 2023 – Present

Violinist

College Park, MD

- Violin player for the Gamer Symphony Orchestra, playing video game music custom-arranged for a full orchestra.