Kieran Khan

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EDUCATION

University of Maryland, College Park — College Park, MD
B.S. Computer Science and Statistics - GPA: 3.7 — *Expected December 2025*
- Dean's List and President's Scholarship Awardee

TECHNICAL SKILLS

Languages: Java, Javascript, Python, C, R, C#, HTML/CSS, OCaml, Rust
Technologies: Git/Github, SQL, ReactJS, Node.js, LangChain, OpenAI, Pandas, TailwindCSS, Scikit-learn, SciPy, Unity, SpringBoot, RESTful API, FAISS, Streamlit, Register360, LangSmith
Certificatons: Oracle Certified Associate–Java SE 8 Programmer

EXPERIENCE

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 insdustrial 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.

RPG Squarefoot Solutions — June 2021 – May 2022
Software Development Intern — *Arlington, VA*
- Developed a 3D virtual engagement space aimed at data visualization for the construction technology industry utilizing **Unity** for 3D development and **Git/Github** for repository management and code releases.
- Researched alternative data visualization implementations to elevate the product to a working prototype.

PROJECTS

TestudoAI | *https://testudoai.streamlit.app/* | *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
  https://github.com/kierankhan/TestudoAI

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 fuctions 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 — Feburary 2023 – Present
Violinist — *College Park, MD*
- Violin player for the Gamer Symphony Orchestra, playing video game music custom-arranged for a full orchestra.