Carlos "Kiko" Federico Trevino II

+1 (956) 740-3573 | carlos.trevino359@utexas.edu | linkedin.com/in/carlos-trevino-ii/

Education

The University of Texas at Austin Austin, TX

Bachelor of Science in Electrical and Computer Engineering, Minor in Business *Aug. 2020 – May 2024*

Relevant Coursework: Algorithms, Software Design and Implementation I and II, Data Science Lab, Software Engineering and Design Lab, Intro to Computer Vision, Software Architectures, Discrete Mathematics, Probability and Random Processes, Engineering Communications, Circuit Theory, Digital Logic Design, Intro to Computing, Intro to Embedded Systems, Intro to Electrical Engineering, 'Information Theory, Coding, Machine Learning and Cryptosystems'

Technical Skills / Accomplishments

Languages: Proficient - Java, Python | Intermediate - C/C++, JavaScript, HTML/CSS, Verilog
Developer Tools/Libraries: Git/Github, Linux (intermediate), MobaXTerm, Android Studio, Postman, MongoDB Compass, TensorFlow, MS Excel, Numpy, Mathplotlib
Accomplishments/Extracurriculars: RaiseMe Scholarship Recipient, AP Scholar Award Recipient, Proficient Spanish Speaker, Member of Society of Hispanic Professional Engineers, Member of Institute of Electrical and Electronics Engineers, Intramural Tennis Doubles Champion, Intramural Basketball Player, Member of UT Club Tennis Team

Projects

FoodVentory | *Group Project* | *React Native, Firebase* Aug. - May 2024

- Developed a cross-platform solution for iOS and Android, aimed at optimizing grocery shopping and meal planning by integrating receipt scanning, virtual pantry management, and intelligent recipe recommendations.
- Implemented key features including seamless receipt scanning and text extraction, creation of a user-friendly interface, and integration of real-time data synchronization using React Native and Firebase.

Human Emotion Recognition in Computer Vision | *Research Project* | *Python* Jan. - May 2024

- Developed an advanced emotion recognition system using computer vision and deep learning techniques, integrating Gabor filtering, edge detection, and key-point processing to classify emotions with high accuracy.
- Conducted comprehensive data collection and preprocessing, utilizing FER+ and RaFD datasets, and implemented ensemble prediction strategies to enchance model performance.

Political Cartoon Generator | *Group Project* | *Python, NLP, Image Generation* November 2023

- Utilised GPT API to enable conversion from article to cartoon as the baseline for comparison
- Created several pipelines utilising DALL-E, StableDiffusion, and OpenFlamingo to find optimal methods for context-based image generation; implemented Doc2Vec model to test viability of generating images from numerical representations

Client-Server with Socket Network Programming | *Personal Project* | *Java* April 2022

- Developed chat room application using Java Socket programming and complex object-oriented programming principles.
- Built and enabled one-on-one chat between users while hosting up to five clients within the server.

Experience

Technology Needs of Refugee Communities Maymester May 2 – June 1, 2023

UT Study Abroad Program *Thessaloniki, GR*

- Collaborated with local Greek NGO 'SolidarityNow' to conduct surveys and engage in focus group discussions with residents of a refugee camp in Polykastro, enabling firsthand insights into the needs and aspirations of the refugee community; Delivered final presentation to the 'SolidarityNow' leadership team showcasing innovative technological proposals.
- Developed strong problem-solving and project management skills while working within a multidisciplinary team, applying engineering expertise to analyze survey data and identify key technological challenges and opportunities to enhance the daily lives of refugees.

Engineering Communications Maymester May 19 – June 17, 2022

UT Study Abroad Program *Paris, FRA*

- Attended four-week Engineering Communications Maymester program hosted by UT Austin in Paris, France.
- Collaborated with team to research and analyze Singapore's sustainability issues and greenhouse gas reduction strategies/innovations; composed 23-page research paper and gave formal presentation on findings.