Carlos "Kiko" Federico Trevino II

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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'

EXPERIENCE

Software Engineering Intern — Aug 2024 – Present

Aristocrat — *Austin, TX*

- Developed and implemented UI features for internal tools within the Mercury Studio suite, improving user experience and streamlining workflows for internal users using React and TypeScript.
- Optimized game asset pipelines by refining asset processing within the Mercury Studio tool, resulting in improved load times and system performance.
- Collaborated with cross-functional teams to identify UI/UX improvements and integrate feedback into feature designs, ensuring alignment with user needs and delivering high-quality, scalable solutions.

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 pre-processing, utilizing FER+ and RaFD datasets, and implemented ensemble prediction strategies to enhance 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.

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, JavaScript, TypeScript, HTML/CSS, Verilog
Frameworks: React Native, Node.js
Developer Tools: Git, Google Cloud Platform, Jira, VS Code, Linux, Android Studio, MobaXTerm, Postman, MongoDB Compass, SVN
Libraries: TensorFlow, pandas, NumPy, Matplotlib