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*

- Designed and implemented a PostgreSQL database using Google Cloud SQL to store Aristocrat's slot game information, building data models and managing data pipelines to ensure efficient data organization and integrity.
- Utilized Gemini API to assist in automating and streamlining data extraction from large game files, improving the efficiency of slot game information gathering and management.
- 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.

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 a chat room application using Java Socket programming and complex object-oriented programming principles.
- Built and enabled numerous features within the chat room, including one-on-one chat between users group chats, and hosting up to five clients at a time.

TECHNICAL SKILLS

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