Summary of Outcomes for Tech Challenge

Completed a three-part tech challenge including a React “Hello World” app, a Streamlit app running a simple Random Forest ML model, and a CLI app integrating Gemini API.

Hello World React App

- Used Vite and React
- Displayed “Hello World!” in the center of the app
- App runs on localhost with “npm run dev”
- Use of vibe coding
    - Prompted ChatGPT and Google Gemini to give instructions on setting up a React app with Vite

Streamlit App

- Used python, pandas, and sklearn
- Trained a model using random forests algorithm to classify iris species based on sepal and petal features
- Incorporated sliding sidebars to adjust sepal length, sepal width, petal length, and petal width
- Use of vibe coding
    - Prompted ChatGPT and Google Gemini to show an example of a simple Streamlit application with sliders
        - Referenced examples and used the Random Forests machine learning algorithm to create the app

LLM API App

- Used Google Gemini API
- Created a CLI app that tells a joke based on the inputted subject
- Limited token usage by system prompting for a short single sentence joke
- Use of vibe coding
    - Prompted Google Gemini to show a simple example of an app that calls the Google Gemini API
        - Referenced this example and added a custom system prompt to create the joke telling feature

Github Link: https://github.com/NelsonJYLee/UBC-Software-Developer-Tech-Challenge-2025