Proposed Projects

Link to cloud skills:
https://www.cloudskillsboost.google/organizations/uc-riverside/invites/ucr-cloud-skills-boost

https://www.cloudskillsboost.google

Project 1 - Course Scheduling Demand
Customer: UCR ITS
This project will deliver predictions for our UCR departments to be able to plan course demand for upcoming terms. It should take into account the course plan for a student, what courses they still need, incoming freshman information from their application, and the historical enrollment rates. We currently have a model that's been built for predicting at the course level what demand will be for upcoming terms. We'd like to refine this to predict number of sections, rooms, and day/time. This could be iterative to add these additional breakdowns.

Project 2 - Schedule Recommender
Customer: UCR ITS
This tool will be student facing to help students plan their upcoming term registrations. The student will login and see their 4-year course plan. Then they could make any modifications they'd like to their course list for the upcoming term. Next, they can input any times that they do not want classes, or preferences such as preferring classes back-to-back in the day or maybe a few hours apart. The recommender will then put together an ideal schedule for them. They could request modifications and have it re-run the recommendations. If the student likes the schedule, it could send the student to Banner, preferably with the section info prepopulated so it's easy for them to register. Lastly, if a section they want is full, it should re-run the recommendation in realtime to substitute depending on seat availability.

While we want the student to be able to interact with this tool in a chat-like interface, we are thinking that the UI needs to be a screen where they can see the full week's schedule similar to how gmail shows the calendar view. It needs to be mobile friendly.

Tools : Firebase ,   AI Studio (generate the UI for you).
Datasets: Degreeworks (what do they have and what they still need), Banner (what courses they completed), Course Schedule (within Banner), integrate the PDF of course plans.

Project 3 - AI Tutor
Customer: UCR Faculty
Implement an LLM based AI tutor and the web interface for interacting with it. The interface will enable students to elevate their sessions to a human tutor for human-to-human messaging that will help answer questions and verify the information given by the AI tutor. Refer to the following link for a longer description:
https://joshua-zingale.github.io/ucr-chatbot-pathway-program/project-plan/