



PETR: A Personalized School Assistant

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Introduction

Checking for homeworks and assignment deadlines is an integral part of students' everyday life. However, navigating through UCI websites like EEE, Canvas, and the Registrar can be difficult and time-consuming. PETR, our personalized school assistant device, aims to solve this issue by simplifying the process through a simple voice command that will navigate websites and create an audible response from a speaker.

Purpose

This project involves the design and development of a device that will provide an easy way to access essential information related to UCI, such as a student's schedule, upcoming UCI events, and more.

Approach

Our approach towards PETR involves the use of a microphone and a speaker on a Raspberry Pi to record and produce sound, with the Google Cloud's Speech-to-Text and Text-to-Speech API. Based on the processed command, PETR will look up, extract, and deliver the desired information from the UCI websites accordingly. SQLite will be used to organize and easily access large quantities of data.

Team Organization

Professor Hung Cao
Mentor

Sean Meads
Administration and Integration

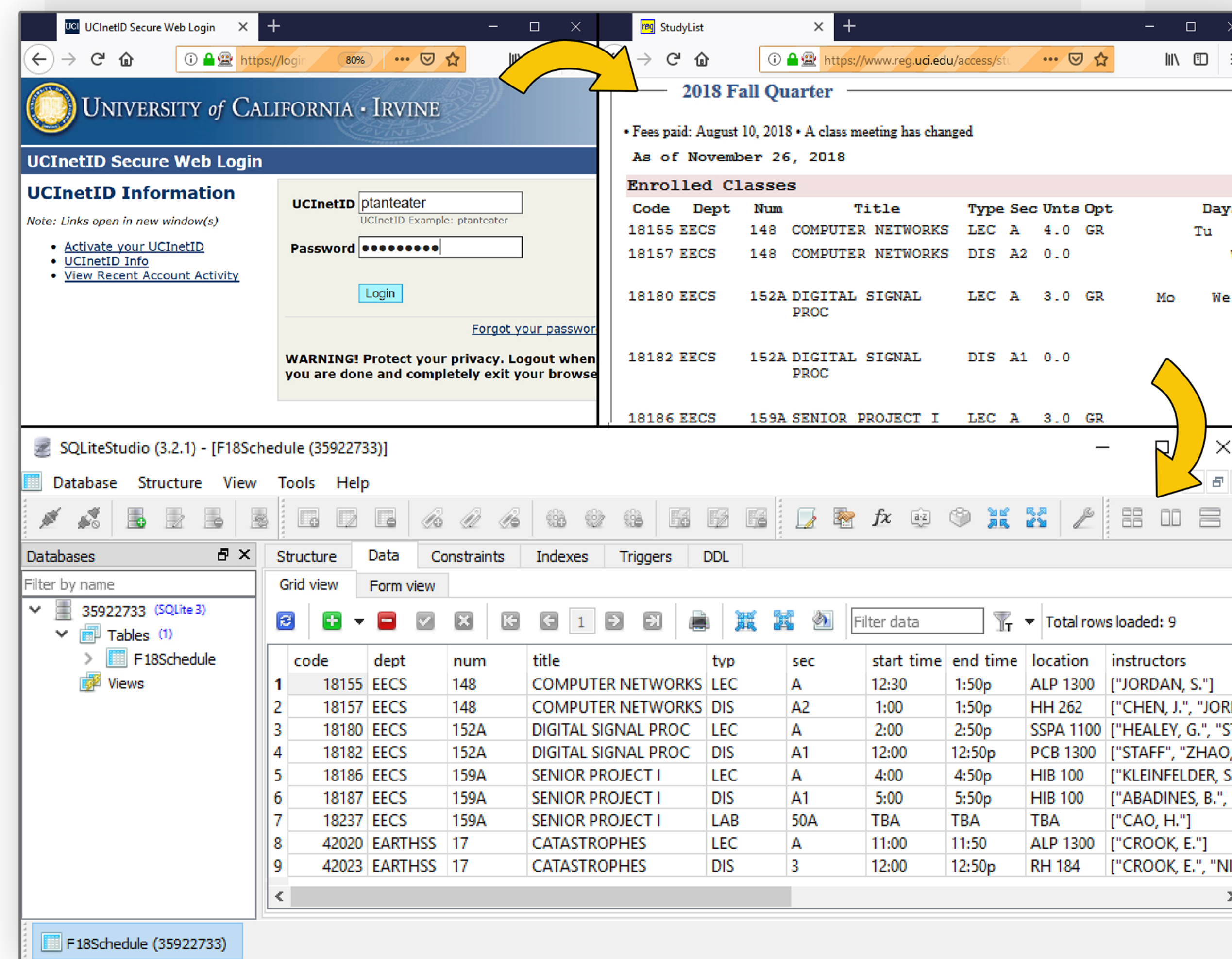
Ori Klein
Speech Processing and API

Andrew Tumang
Web Parsing and Database

Kodai Fukawa
Hardware

Progress Made

Week 1: Team Establishment
Week 2: Determined Project Goal
Week 3: Functionality Planning
Week 4: Research into Speech Recognition
Week 5: Research in Hardware and Database
Week 6: Purchased and Acquired Hardware
Week 7: Development of Web Parsing Scripts and Database
Week 8: Began Integration of Hardware and Software



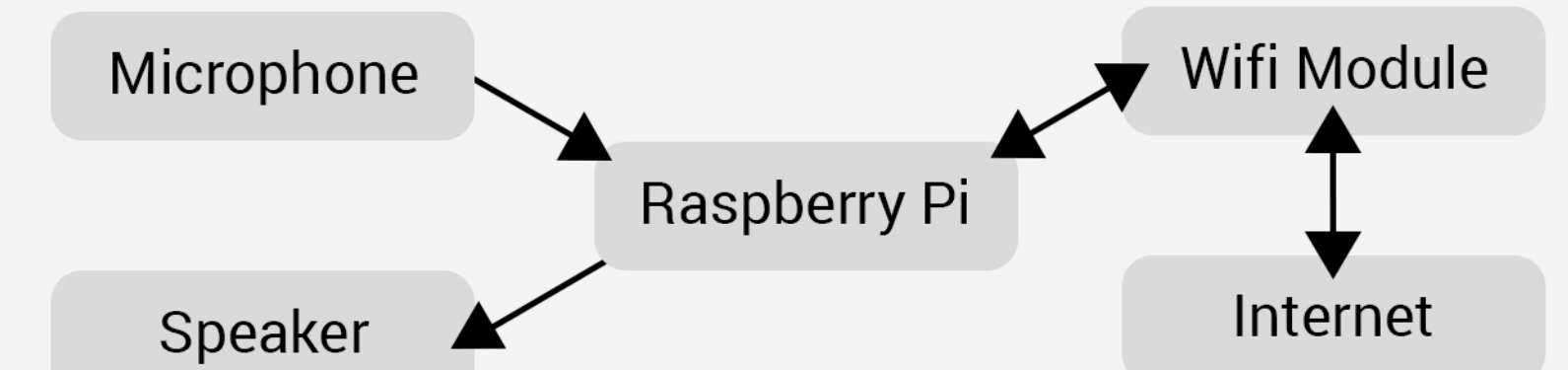
PETR runs a browser in the background which allows it to log in to and extract information from various UCI websites. Depending on the type of information, the data will be added to an SQLite database, which is used to answer specific questions from the user

Future Work

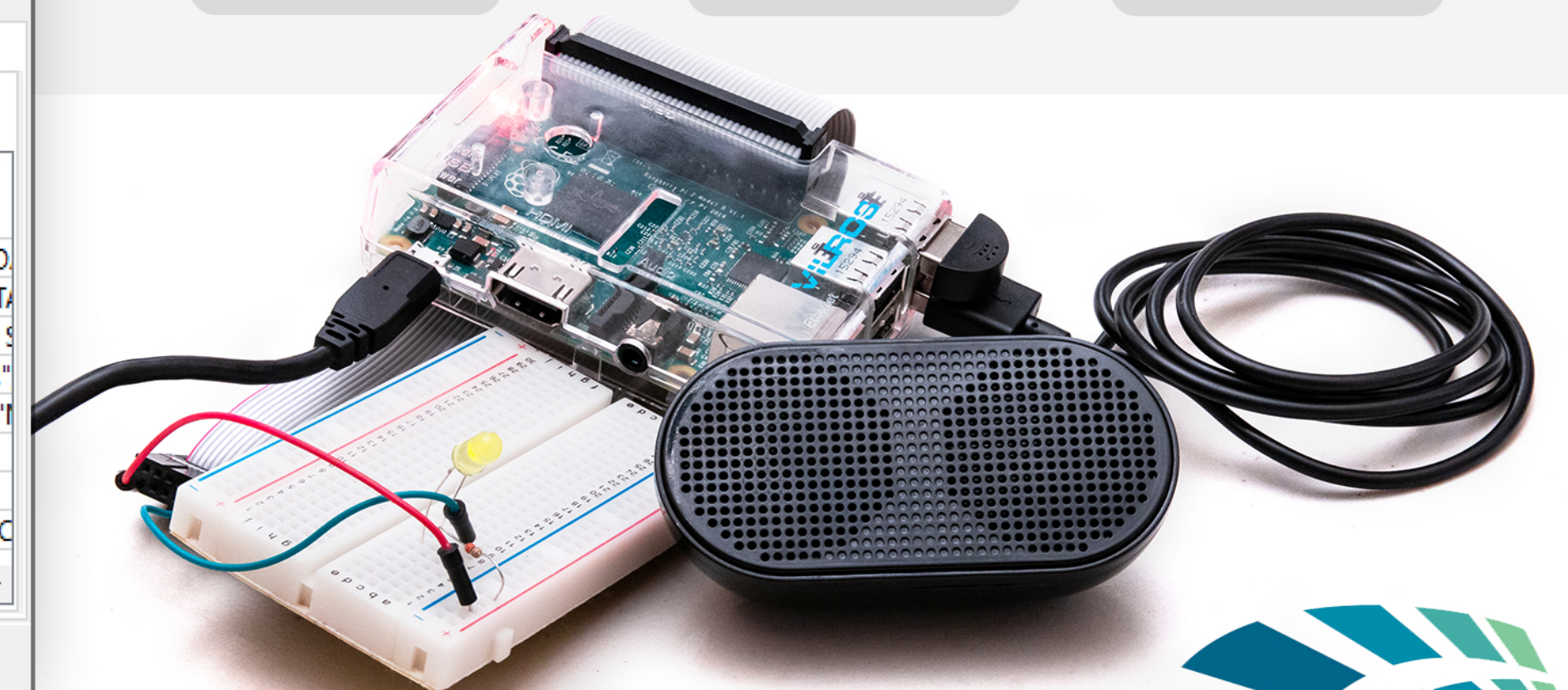
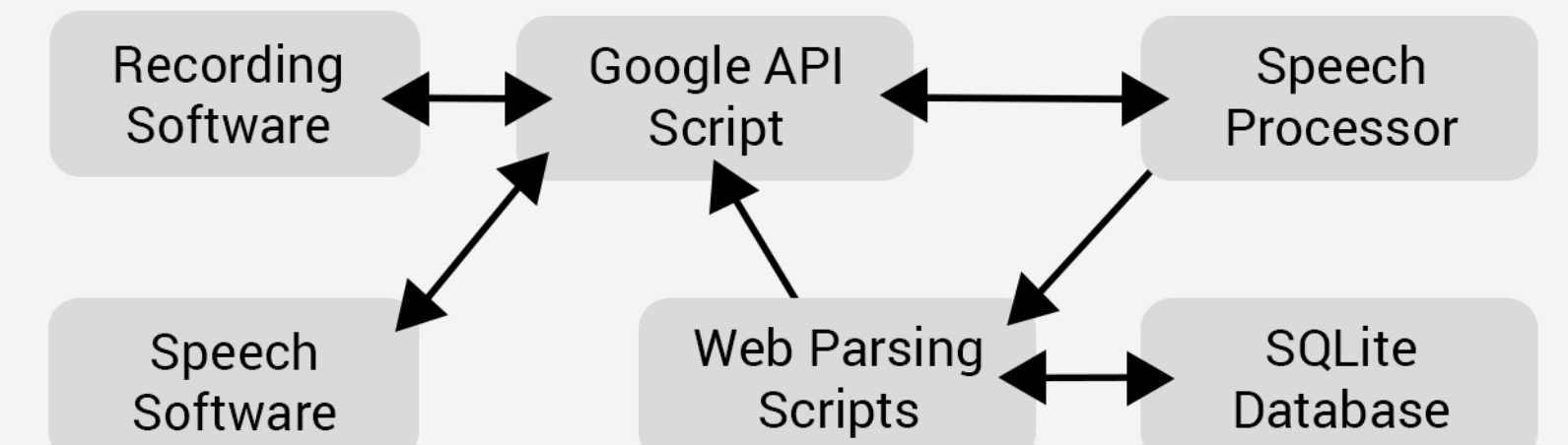
We hope to accomplish a working prototype with an extensive set of voice commands by the end of the quarter, while continuing research on implementing additional features such as GPS capabilities and schedule planning.

Systems Architecture

Hardware:



Software:



Contact

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