

OurPurduePlan

Collaborators: Neil Van Eikema Hommes, Michael Dimitrov, Jack Roscoe, Cooper Chiappetta

Problem Motivation

- MyPurduePlan
 - Does not allow you to persist planning with the “what if” feature
 - Does not allow you to save multiple plans of study
- Collaborative degree planning
 - There is no centralized space that allows for collaboration on creating plans of study
 - Students must scour media outlets (i.e. Reddit) to find plans of study that worked for others

Project Goals

- Interface for **building plans of study**
 - Manage the creation/deletion of semesters and courses in plan
 - Responsive error messages for degree or prerequisite requirements
 - Branching system to allow for semesters to split off into multiple new potential plans
- Create a forum for **sharing plans of study**
 - Search for posts by name and filter by degree or implied difficulty
 - Comment and Upvote Posts to encourage collaboration
 - Make copies of posted plans in order to tweak
- Create a difficulty **rating system for courses**
 - Search for courses and see relevant information
 - Component on the course page for giving a difficulty rating
 - Use course difficulties to calculate useful statistics

Design Choices

- React UI + Elixir API with Phoenix + PostgreSQL database (client-server)
 - The UI needed to be reactive to provide a allow for responsive plan creation
 - Elixir and Phoenix provides robust concurrency support as well as a built in way to interact with databases called Ecto.
 - We chose PostgreSQL because a few of us had prior experience with it.
 - Client communicates with server via HTTP api calls.
 - The client-server model ensured that the backend only needed to return data, while the frontend was able to be changed easily.
- Auth with Phoenix signed tokens
 - Phoenix tokens `signed` with sha256-hmac and sent in http auth header.