Team 22 Project Charter

BoilerTime

**Team Members:**

Henry Mayer, Joshua Yang, Justin Lai, Mahad Faruqi, Nicholas Powers, Zachary Sy

**Project Title:**

BoilerTime: A Complete Class Schedule Optimizer

**Problem Statement:**

Students at Purdue University struggle to find the optimal schedule that balances the various factors of their day. BoilerTime eases this by ingesting user preferences and matching it with a variety of data sources to find the optimal class sessions based on student feedback, distance between buildings, bus times, previous grade distributions, and friends’ schedules. As students already tend to closely reference individual services separately such as Rate My Professors, Google Maps, and BoilerGrades during class registration, this service combines them all into one application interface and provides a detailed analysis to recommend a complete schedule.

**Project Objectives:**

The overall project objective is to develop a website that will give Purdue students the ability to optimize their semester’s class schedule based on different data sources all in one place.

* Design a user-friendly website that helps students optimize their schedules to meet their needs and preferences
* Integrate data sources to show users relevant data to their classes
* Create a calendar that visualizes a student’s schedule
* Develop an algorithm to recommend and optimal student schedule based on their personal preferences
* Create a system for users to match their schedules with friends
* Allow users to export their optimized schedule to their preferred format of choice

**Stakeholders:**

*Users*: Purdue University students seeking to schedule classes based off their preferences

*Developers*: Henry Mayer, Joshua Yang, Justin Lai, Mahad Faruqi, Nicholas Powers, Zachary Sy

*Project Manager*: Yi Wu

*Project Owners*: Henry Mayer, Joshua Yang, Justin Lai, Mahad Faruqi, Nicholas Powers, Zachary Sy

**Project Deliverables:**

* A Vue JS and Tailwind based front end web application that allows users to add classes they are taking and their preferences and presents recommendations through a calendar
* A Node JS back end to store class lists from the users into the database and query the optimizing algorithm to create a schedule
* Optimizing algorithm written in Java to create the schedule based on the user inputs
* Java API queries to get data from BoilerGrades, Purdue.io, Google Maps, Rate My Professors
* NoSQL JSON database for storing user profiles and the outputted schedules from the scheduling algorithm

