Lab 1: Productive Places Description

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1 Introduction

Students and remote workers face a problem: finding environments suitable for productivity outside of the house. This can stem from multiple reasons: home factor limitations, space constraints from outside locations, and limited helpful resources. For example, some home factor limitations that students and remote workers face include familial obligations, distractions, and other domestic responsibilities. Meanwhile, some space constraints that are present in outside locations are limited hours, inconsistent amenities that lead to an unproductive workplace, limited seating, and high noise levels from said environments and amenities. As seen on the UCLA campus, "study spaces and libraries on campus…often become crowded, making it…[hard]…for students to find a spot to study in peace – and have…personal space. The university's communal computers are mostly limited to libraries, and tutoring is elusive for students who need it most. Existing spaces are also not easily accessible for students who live off campus" (Raychawdhuri, 2019). This issue is concerning because 58% of high-performance employees stated that they need more "private spaces for problem solving" (Belk, 2017). Lastly, there are limited helpful resources catered to students and remote workers for finding productive places to study. For example, there are no centralized platforms for finding suitable workplaces, the layout of many popular apps makes the process of finding a suitable workplace more time-consuming, and there is no occupancy information available for users. Thus, our group presents "Productive Places," a web application designed to help students and remote workers find optimal locations to work and study, without the hassle of home factor limitations, space constraints, and the lack of helpful resources. Based on the problems addressed above, multiple features will be provided to refine the process of finding a suitable place to be productive outside of home: Location-Based Search, Advanced filtering for specific amenities, Community-driven reviews and ratings, Real-time availability updates, and Detailed Workspace Profiles.

2 Productive Places Description

    The solution that will be developed to solve the problem of finding suitable environments

for being productive outside of the house, is a tool for filtering user-reviewed establishments.

The goal of the software is to provide a method for finding efficient studying locations that fit the

specific needs of each student, including operating hours, WiFi availability, and charging outlets.

Furthermore, the primary objective of Productive Places is to make it easier to find optimal

locations nearby that are open, fill the end user's needs, and have been reviewed by others to be
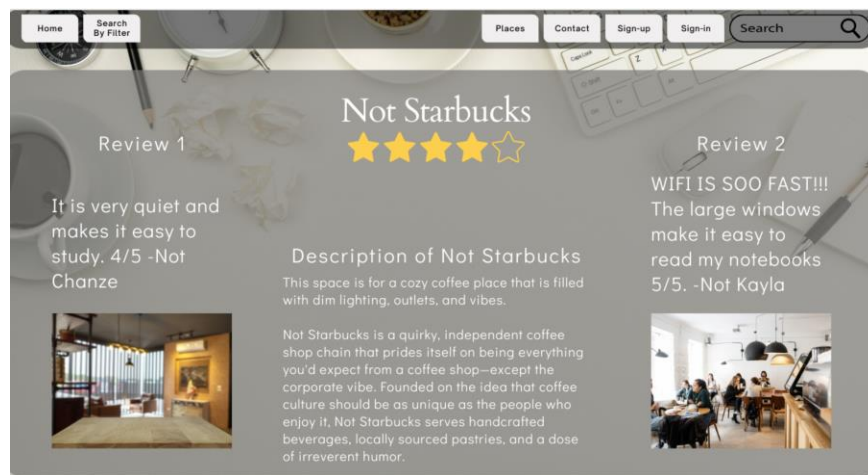
deemed as acceptable places to study.

Figure 1: Planned layout for Productive Places

2.1 Key Product Features and Capabilities

    Users can search for optimal locations suited for being productive, with the help of Google

Maps API, use filters to customize their searches based on their specific needs, and use filters to

find locations that remain open during hours that fit their schedule. Additionally, the proposed

web application will have a section dedicated to user-generated reviews to help potential visitors.
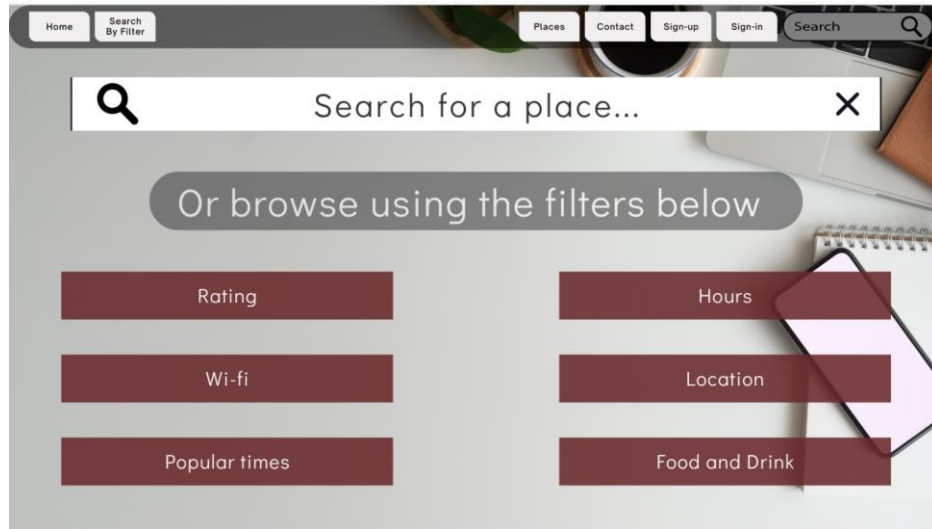
Figure 2: Location Based Search and Amenities Filtering

2.2 Major Components (Hardware/Software)

Linux will be used as the Operating System to manage git commands and set file permissions. Git helps keep track of file changes while file permissions are used to manage who can execute, edit, or read the existing code. Apache will be used as the webserver, where students, Workers, and Business Owners can access the web application, and Nodejs will be a supplement to the web server. PostgreSQL will be the database that is used, and the backend web server will communicate with the database.

Category	Application
Version Control	Git/Github
Languages	HTML, CSS, JavaScript, SQL
Issue Trackng	Trello
Database	MySQL

IDEs	Visual Studio Code
Components/API	JavaScript API, Google Maps API
Testing Framework	MochaJS

Table 3: Development Tools

3 Identification of Case Study

This product is being developed for students and remote who struggle to concentrate on studying and completing work at home for various reasons. Many students cannot find a quiet place to study, and people needing a quiet place to work, eat, or communicate may also use this application.

4 Glossary

API (Application Programming Interface): A set of rules that allows two software

applications to communicate with each other and exchange data.

Body doubling effect: When a person is more motivated to be productive in the presence of

others, rather than alone at home.

Git: An instance of a Version Control system.

Integrated Development Environment (IDE): Software application that provides facilities for

software development.

User Interface (UI): Visual elements of a software product.

User Experience (UX): Overall experience and interaction a user has with a product.

Version Control: Allows users to keep track and manage revisions or changes made to code.

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