

Lab 1 – Productive Places

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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 factors: home factor limitations, space constraints, and limited helpful resources. Some home factor limitations that students and remote workers face include distractions, family, and limited structure. Meanwhile, some space constraints that are present are limited hours, inconsistent amenities, limited seating, and noise levels. Lastly, there are limited helpful resources available for students and remote workers. For example, there are no centralized platforms for finding suitable workplaces, the process of finding a suitable workspace can be a time-consuming process, there are varying amenities availability, and there is no occupancy information.

Thus, our group presents “Productive Places”, a web application designed to help students and remote workers find optimal locations to work and or study, without the hassle of home factor limitations, space constraints, and limited helpful resources. Multiple features will be provided to refine the process of finding a suitable place to be productive outside the home: Location-Based Search, Advanced Filtering for amenities, Community-driven reviews and ratings, Real-time availability updates, and Detailed Workspace Profiles.

2 Productive Places Product Description

Our solution to the problem of finding suitable environments for being productive outside of the house is a tool for filtering user-reviewed establishments. The goal of our 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. The primary objective of our target users is to find optimal locations nearby that are open, fill their needs, and have been reviewed by others to be acceptable places to study.

2.1 Key Product Features and Capabilities

Users can search for optimal locations suited for being productive, 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. The proposed web application will have a selection dedicated to user-generated reviews to help potential visitors.

2.2 Major Components (Hardware/Software)

Linux will be used as the Operating System to manage git commands and set file permissions. 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.

3 Identification of Case Study

This product is being developed for students who struggle to concentrate on studying and completing schoolwork 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: Version Control
- Version Control: Allows users to keep track and manage revisions or changes made to code.
- 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.

5 References

Draw.io - free flowchart maker and diagrams online. Flowchart Maker & Online Diagram

Software. (n.d.).

<https://app.diagrams.net/#G1t9nWqBpGWQlMPaaylTz1KpGtWdZxeuol#%7B%22pageId%22%3A%22C5RBs43oDa-KdzZeNtuy%22%7D>

Dziuba, A. (2024, January 12). Why and when to use node.js in 2024 [Complete guide]. Relevant

Software. <https://relevant.software/blog/why-and-when-to-use-node->

[js/#When_Not_to_Use_Nodejs](https://relevant.software/blog/why-and-when-to-use-node-js/#When_Not_to_Use_Nodejs)

Falk, A., & Ichino, A. (2006). Clean Evidence on Peer Effects. *Journal of Labor Economics*,

24(1), 39–57. <https://doi.org/10.1086/497818>

Goodwin, M. (2024, April 9). What is an API (application programming interface)?. IBM.

<https://www.ibm.com/topics/api>

Hutsulyak, O. (2024, August 13). Why use react for web development: 10 reasons to apply.

TechMagic. <https://www.techmagic.co/blog/why-we-use-react-js-in-the-development/>

Kennedy, T. (n.d.-a). CSTKENNEDY/CS410-411W-examples. GitHub.

<https://github.com/cstkennedy/cs410-411w-examples>

King, B. B. (n.d.). Inspire lifelong learning with these 25 education quotes.

<https://www.adobe.com/express/learn/blog/25-educational-quotes>

Smallcombe, M. (2024, September 4). PostgreSQL vs MySQL: The critical differences.

Integrate.io. <https://www.integrate.io/blog/postgresql-vs-mysql-which-one-is-better-for-your-use-case/>

Steinmetz, J., & Fishbach, A. (2021, February 1). We work harder when we know someone's

watching. *Harvard Business Review*. <https://hbr.org/2020/05/we-work-harder-when-we-know-someones-watching>