Mitchell Kolb

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Education

Bachelor of Science, Computer Science
Washington State University | Pullman, WA

Professional Experience

Assistant Software Developer   Pullman, WA
Psychology Department, WSU   Oct 2023-Current
- Developed code for two projects, GSUR Data Automation Tool which downloads and analyzes data saved in a local server, and the EMMA Dashboard which is used by all researchers to visualize patient information.
- Actively communicated project progress by following the **AGILE** methodology with weekly sprint meetings and reflection meetings.
- Presented completed software at the WSU Research Symposium to a crowd of 80 people.

Teacher's Assistant – Data Structures C/C++   Pullman, WA
Washington State University   May 2020-Aug 2020
- Educated students in the fundamentals of programming paradigms in **C/C++** by hosting weekly labs and office hours.
- Leveraged my knowledge of common misconceptions students make learning new programming languages to help **improve productivity**.
- Managed and **graded sensitive content** such as programming assignments, examinations, and lab materials.

Projects

GSUR Data Automation Tool
Repo: https://github.com/mitchellkolb/GSUR
- Fully local application tool streamlining the process of downloading and analyzing data from the EMMA training website, enhancing productivity for researchers at WSU Neuropsychology and Aging Laboratory.
- Built with **Python**, using **CustomTkinter** and **Selenium**.
- Used to assist Diane Cook in defending her dissertation for her doctorate at Washington State University.

Living Atlas
Repo: https://github.com/mitchellkolb/living-atlas
- Web application for environmental data integration, enhancing data accessibility and engagement through advanced visualization and real-time sharing capabilities.
- Architected and implemented a robust platform using React and FastAPI, optimizing performance and user experience with interactive maps and scalable backend solutions.
- Built with **Javascript/Python** using **React, FastAPI, PostgreSQL**.

Airline Search Engine
Repo: https://github.com/mitchellkolb/airline-search-engine
- Graph-based airline search engine utilizing Neo4j and PySpark, enabling complex route optimization and trip planning by efficiently processing and visualizing relationships across 67,000+ routes and 7,698 airports.
- Designed and implemented a user-friendly GUI with an advanced backend that supports scalable, real-time data queries, significantly enhancing travel planning and operational decision-making for users.
- Built with **Python** using **PySimpleGUI, Hadoop, Spark, and Neo4j**.

Linux EXT2 Filesystem
Repo: https://github.com/mitchellkolb/ext2-file-system
- A **Linux-compatible ext2 filesystem** that can run off of existing disk images or create its own on startup.
- Traverse or modify the filesystem with basic commands such as cd, ls, mkdir, rmdir, and pwd. Open files for read and write operations.
- Built with **C**.

Skills

Programming Languages: C/C++, Python, SQL, HTML
Frameworks and Tool: GitHub, Pytorch, Git, VSCode, Azure Services, PostgreSQL, Jupyter Notebook

Other Experience

Bakery Assistant   Pullman, WA
Safeway Grocery Store   June 2021-Jan 2023
- Prepared and packaged various pastries while providing exceptional customer service

Courtesy Clerk   Spokane, WA
Albertsons Grocery Store   Aug 2016-June 2019
- Assisted in bagging customers groceries and cleaning the store premises.