

# Mihir Trivedi

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## EDUCATION

### University of Wisconsin - Madison

Sep 2021 - May 2025

Bachelor of Science in Computer Science; GPA: 3.6/4.0, Dean's List x3

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Database Systems, Big Data, Artificial Intelligence, HCI

## TECHNICAL SKILLS

**Languages:** Python, PHP, Java, JavaScript, Swift, C, C++, Go, R, SQL

**Technologies:** Git, Docker, AWS (EC2, Lambda, SQS, SNS, DynamoDB), GCP, MySQL, Spark, Kafka, Cassandra, BigQuery, Jira

**Libraries/Frameworks:** Laravel, React, Vue, Tailwind, SwiftUI, SwiftData, Flask, Scikit-Learn, Pytorch, Pandas, PyQt5, JUnit

## EXPERIENCE

### Software Engineer Intern

May 2024 - Aug 2024

Singlewire Software

Madison, WI

- Developed a chrome extension using **JavaScript (Vue)** that prints visitor badges automatically by binding to public channels and listening to broadcasted visitor check-in events based on a selected location. Set up auth flow via API calls to web server.
- Refactored large data tables to display information and actions regarding visitors, students, emergencies, locations, and activity logs in **Laravel** in real time using advanced eloquent ORM queries. Improved filtering, sorting, pagination performance.
- Enhanced import/export functionalities and permission-based CRUD operations using **RESTful APIs**.
- Worked closely with the CTO, PMs, software engineers, QA and Support to plan and implement features in bi-weekly sprints.

### Full-Stack Developer (Part-Time)

Mar 2023 - May 2024

Pantry2Home

Madison, WI

- Developed [pantry2home.com](https://pantry2home.com), a server-side web application independently to support **over 2,500** food-insecure families in placing **over 5,000** pickup/delivery orders containing **over 100,000** food items from different food pantries in Wisconsin.
- Engineered an object-oriented **PHP** backend integrated with an **SQL** database, and **HTML/CSS** frontend, incorporating the **MVC** design pattern, to implement functionalities such as user account management, order processing & tracking, and pantry inventory management encompassing diverse food categories. Utilized **Git** for version control.
- Collaborated closely with co-founders, pantry managers to brainstorm and conceptualize innovative website features.

## PROJECTS

### Capital One Event-Driven Fraud Detection System | AWS (Lambda, DynamoDB, SQS, SNS), Python, React

Sep 2024

- Designed and implemented a fraud detection system on **AWS**, utilizing **SQS** to queue credit card transactions, **Lambda** functions to apply **isolation-forest** models stored in **S3** for fraud detection, and **SNS** to notify users of results via email.
- Utilizing **DynamoDB** to read/write new transactions, allowing users to confirm or deny fraudulent activity through a **React** UI, and re-training models on the new labelled transaction data for improving overall fraud detection accuracy.
- Working under guidance of **Capital One** software engineers as part of the UW-Madison computer science capstone project.

### Wealth Roadmap iOS Application | Swift, SwiftUI, SwiftData, AWS (Lambda, DynamoDB), Xcode, Git

Oct 2024

- Developing an iOS application in **Swift** using the **MVVM** design pattern to provide a comprehensive set of financial tools that help users plan and grow their wealth by analyzing income, expenses, assets and liabilities for accurate financial projections.
- Integrating **RESTful AWS API** to trigger **Lambda** functions, enabling efficient serverless read/write operations in **DynamoDB**, optimizing data management, ensuring scalability and enhancing reliability of the application.

### Advertisement Click-Through Rate Prediction Model | Python, Pandas, Scikit-Learn

Apr 2024

- Developed a model in **Python** that predicts with **over 90% accuracy** if a user would click on an advertisement by considering different features across multiple datasets. Utilized techniques such as logistic regression, scaling, and one-hot encoding.

### Remote Procedural Call System | C, Git

May 2023

- Developed a remote procedural call system in **C**, facilitating the tracking of **100+** connected clients by a remote server.
- Employed multi-threading to enable concurrent servicing of multiple client requests, enhancing system efficiency by **400%**.

## LEADERSHIP

- Participated in the **Google Solutions Challenge (2022)** to develop a progressive web app using **React** and **Firebase** in a team of four people to help reduce food wastage in developed countries.
- Developed and taught a technical skills program at **Porchlight's** homeless shelter funded by the **Dream Big Award** from **WSB**.
- Taught **computational thinking** at Thoreau Elementary under guidance of Prof. Andrea Arpaci-Dusseau.