

# Mirva Dudhagara

+1 930-215-6207 — [dudhagaramirva@gmail.com](mailto:dudhagaramirva@gmail.com) — [LinkedIn](#) — [GitHub](#)

## SUMMARY

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## EXPERIENCE

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### Full Stack Developer, Kelly School of Business

July 2024 – Present | Bloomington, IN

- Designed and developed a secure data ingestion system for MHAI-Pal, an iOS-based mental health research platform with **6,000 MAUs** across **2** universities, capturing **10M+** time-series data points from sensors and surveys for clinical research use.
- Built scalable, concurrent data pipelines using Grand Central Dispatch (GCD) and iOS background tasks, reducing event processing latency by **35%** and increasing throughput during peak collection intervals by **20%**.
- Engineered **HIPAA-compliant** data storage using **PostgreSQL** and **Jetstream** with **AES-256** encryption, **JWT-based** user auth, ensuring end-to-end security for sensitive health data.
- Integrated native sensor frameworks (HealthKit, CoreLocation, CoreMotion, CoreBluetooth) to abstract device-level metrics into structured, backend-ready JSON payloads, facilitating seamless ETL into research databases for longitudinal studies.
- Instrumented custom user engagement flows using push notifications, local scheduling logic, and modular dashboards, resulting in a **30%** boost in 7-day retention and improving response rates on validated psychological scales (e.g., PHQ-9, GAD-7).

### Software Developer - Intern, Hyphenova

Oct 2024 – Dec 2024 | Los Angeles, CA

- Engineered a cross-platform app with **React Native** and **TypeScript**, maintaining **97%** crash-free sessions on both iOS and Android during development.
- Architected a scalable **RESTful API** with **FastAPI (Python)** and **MongoDB**, leveraging advanced indexing and caching to cut response times by **30%** in staging and ensure readiness for future production demands.
- Led the **SDLC** in an **Agile** environment, collaborating with QA and operations to achieve a **70%** success rate for new initiatives.

### Software Developer, Indiana University

May 2024 – July 2024 | Bloomington, IN

- Revamped [teaching.iu.edu](https://teaching.iu.edu) for **400+** faculty members using **React.js**, **Next.js**, and **Tailwind CSS**, improving the website's accessibility and reducing page load time by **50%**.
- Developed an automated email service with **Node.js** and **Express**, streamlining faculty communication by sending **750+** personalized emails per month, increasing engagement by **40%**.
- Built and integrated a faculty-exclusive email archive system using **AWS DynamoDB** and **AWS Lambda**, enabling instant retrieval of past communications, reducing query latency by **60%**.

### Software Developer - Intern, Swayam Infotech

Feb 2023 – Jun 2023 | India

- Collaborated with cross-functional teams and client to develop Sound Medicine for iOS, improving visuals using **SwiftUI** and **MVC** architecture.
- Configured Apple Pay for in-app purchases, supporting monthly and yearly subscriptions.
- Formulated and executed **100+** test cases for feature and UI validation using **XCTest**, reducing bugs in production by **35%** and improving release stability.
- Published the app on the App Store, meeting Apple's guidelines and compliance standards.

## SKILLS

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**Programming Languages:** Swift, Objective-C, Python, C, JavaScript, Java, SQL, C/C++, NodeJS, , Kotlin, HTML, CSS

**Architecture Patterns:** MVC, MVP, MVVM, VIPER

**Database & Cloud:** MySQL, GraphQL, MongoDB, DynamoDB, Firebase, Docker, Jira, AWS S3 Buckets, EC2, IAM, Postman

**Frameworks:** SwiftUI, TypeScript, NativeScript, Angular, React.js, React Native, Spring Boot

**Developer Tools:** Xcode, Visual Studio, Git, GitLab

## PROJECTS

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### Event/Venue Management System

- Engineered a responsive and dynamic front-end using **ReactJS**, ensuring a seamless user experience across devices and platforms.
- Developed a highly scalable backend architecture leveraging **Node.js** and **Express**, optimizing data processing and API performance.
- Implemented CI/CD pipelines using **Docker** for containerization and Render.com for streamlined continuous deployment.

### CloudShare

- Developed a secure file transfer application using React and **AWS Amplify** with 2FA authentication, implementing encrypted file storage on **AWS S3** to ensure data privacy.

EDUCATION

Master of Science - Computer Science, Indiana University Bloomington

Aug 2023 – May 2025