# NIHAL SHETTY

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## EDUCATION

**Indiana University** August 2023 – May 2025
Master of Science - Computer Science; GPA – 3.84

**NMIMS' Mukesh Patel School of Technology Management and Engineering** July 2019 – May 2023
Bachelor of Technology - Computer Science and Business Systems; GPA – 3.59

## PROFESSIONAL EXPERIENCE

**Full Stack Developer Intern |**React Native, Node JS, FastAPI, Express August 2024 – December 2024
Hyphenova, Los Angeles CA.
- Led the development of key user-facing features including onboarding, profile, chat and creator pages using custom component libraries and structured form handling, improving input validation and overall UX consistency.
- Optimized rendering performance by restructuring state updates in Redux and minimizing unnecessary re-renders, resulting in smoother UI transitions and improved responsiveness on low-end devices.
- Integrated FastAPI with MongoDB to build secure backend endpoints for account and session management, enabling robust support for JWT-based authentication and persistent user sessions.
- Collaborated with a team of 8+ engineers to implement modular navigation flows using React Navigation and documented & tested all RESTful endpoints using Postman, ensuring smooth integration and backend reliability.

**Full Stack Engineer Intern |**React, Node JS, Angular MongoDB, Express May 2024 – August 2024
Y STEM & Chess Inc., Boise ID.
- Assisted in migrating the company's main platform from Angular to React, restructuring components and implementing routing via React Router to improve maintainability and frontend performance.
- Built responsive frontend pages with React and Bootstrap, integrating REST APIs using Axios and validating data flows with Postman to ensure functional and user-friendly interfaces.
- Contributed to backend development using Express and MongoDB, implementing API endpoints for managing session data, chat logs and user profiles.
- Worked on development of a video conferencing module using Agora, integrating early-stage audio/video streams and UI components to support virtual sessions between students and instructors.

**FOSSEE Intern |**Python, PHP, SQL, Linux March 2022 – October 2022
Indian Institute of Technology – Bombay, Mumbai, India
- Spearheaded a critical Moodle platform upgrade for the Spoken Tutorial initiative by analyzing over 2,000 relational database tables and optimizing 32 performance-critical ones, ensuring schema alignment and improved query efficiency.
- Reduced upgrade downtime by scripting automation tools in Python and SQL to trace undocumented changes across 4,000+ lines of legacy backend code, accelerating refactoring, data migration validation and integration testing.
- Identified and resolved backend-level compatibility issues during the transition to the latest stable Moodle version and implemented solutions addressing both backend logic and data schema inconsistencies.

## ACADEMIC PROJECTS

**CourseCraft Learning Management System |**React, Express, Firebase, NodeJS
- Developed a full-stack Learning Management System enabling instructors to create, manage and organize courses, assignments and student interactions. Optimized load times and database queries to improve overall performance, resulting in a 35% faster page load across key user flows.
- Deployed the application on Render with integrated authentication, real-time database sync and user role management, maintaining 99% uptime.

**2048 Game - iOS |**Swift, SpriteKit, AVFoundation
- Built a multi-screen 2048 puzzle game with responsive swipe gesture controls, animated score popups via SpriteKit and dynamic grid rendering using CoreGraphics.
- Implemented persistent high score tracking with CoreData, customizable settings and sound effects with AVFoundation, delivering a polished, replayable gameplay experience.

## PUBLICATIONS

**Conversational AI Based College Enquiry Chatbot |**Python, SQL, Microsoft Azure
- Designed and developed a chat-bot using conversational AI to provide useful results in real-time to replace the university website's existing rule-based chat-bot. ([https://doi.org/10.22214/ijraset.2023.51324](https://doi.org/10.22214/ijraset.2023.51324))

## SOFTWARE SKILLS

**Programming Languages:** Python, Java, C, C++, JavaScript, TypeScript, SQL, Kotlin, Swift, PHP, R, MATLAB
**Web & App Development:** React, Angular, Node.js, Express, Android Studio, Xcode, HTML, CSS, Flask, Django, Bootstrap, MERN & MEAN Stack, Streamlit, Redux, REST API, Spring Boot, Electron, Vite, GraphQL
**Databases/Datastores:** SQL, MongoDB, PostgreSQL, Firebase, RDBMS, MySQL, Redis
**Cloud & DevOps:** AWS, GCP, CI/CD, Docker, Kubernetes, K8s, GitHub Actions
**Miscellaneous:** Data Structures, Algorithms, Linux, Microsoft Azure, Agile, Git, Jira, Postman, Excel, VS Code, Version Control, Operating Systems, Computer Networks, TCP/IP