DILEEP KUMAR ADARI

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EDUCATION

International Institute of Information Technology, Hyderabad   **Aug 2022 - Present**
Bachelor of Technology in Computer Science & Engineering with Honors   *Expected Graduation - May 2026*

Coursework: Data Structures & Algorithms • Operating Systems & Networks • Database Management Systems • Software Engineering • Information Security • Data Analytics • IoT • Embedded Systems

EXPERIENCE

Google Summer of Code 2025 | Joomla! CMS   **May 2025 - Sep 2025**
- Engineered a robust, end-to-end **workflow management** solution with an intuitive visual tool that simplified article stage management in Joomla CMS, consolidating a 6-7 page process into a single, unified interface.
- Spearheaded 2 concurrent projects including a plugin using Vue.js, PHP, and Joomla Framework, significantly improving the delivery timeline by 2 weeks through proactive open-source collaboration and communication.

Undergraduate Researcher | SERC Lab, IIIT Hyderabad   **Apr 2024 - Present**
- Investigating the core principles of applied **human-centered design** and **human-computer interaction** under **Dr. Raman Saxena** over the last 15 months to enhance user satisfaction and usability of complex software systems.
- Enhanced user-centric ERP system enhancements used by 4,000+ people by applying design thinking, usability testing, accessibility, streamlining workflows for over ten use cases and measurably improved user satisfaction.

Software Engineering Intern | Virtual Labs   **Jan 2024 - Apr 2024**
- Architected and developed a **VS Code Web Extension** using TypeScript, GitHub actions and Webpack to create the Virtual Labs Authoring Environment, streamlining the creation workflow for over 1,000 students.
- Drove the refinement of more than 10 product features by facilitating weekly client feedback sessions and fostering effective collaboration between technical and non-technical teams, delivering the project within time.

Web Administrator | IT Office, IIIT Hyderabad   **Aug 2023 - Present**
- Ensured high availability and reliability for **university websites** serving over 1,000 daily users through real-time health monitoring & streamlined deployment pipelines, enabling rapid incident diagnosis and resolution.
- Diagnosed & resolved 10-30 technical issues per month, ranging from backend errors to performance bottlenecks, through debugging by reducing downtime & maintaining service continuity for critical university web infra.

PROJECTS

University Canteen Management (`React.js, FastAPI, GraphQL`)   **Source Code | Live Demo**
- Architected and built **CanteenX**, a scalable, full-stack web platform designed to support a complex ecosystem of multiple vendors, student accounts, and administrators to streamline food ordering and payments.

Smart Crop/Plant Monitoring (`Flask, ThingSpeak, OM2M`)   **Source Code | Live Demo**
- Developed **PlantIQ**, a sensor-driven monitoring system capable of detecting plant stress, water requirement and nutrient imbalances with 95% accuracy by analyzing real-time sensor streams to proactively alert farmers.

Network File System (`C, Concurrency, Networking`)   **Source Code | Execution**
- Built **NFSDrive**, a distributed, fault-tolerant file system in C from the ground up, implementing all networking & concurrency, utilizing TCP socket programming to ensure high data availability & consistency.

Redesigned Institute Management System (`Figma, Prototyping`)   **Figma**
- Designed a comprehensive transition plan from Legacy Systems to **Institutional ERP** applying Human-Centered Design for IMS, outlining pilot usability testing, methodology, findings, & prioritized design recommendations.

Additional Projects   **GitHub**
- Tourism ToolKit • Smart Power Grid • Conference Booking API • Digital Library System • BlogNest • Finance Learning App • VoteArena • Trendify • ChatWrap • FaceBook Clone • Mess Inspection Tool • SplitMate • LifeBook • TimeTrack • Music Mania • PEC db • WebHunt • Enhanced Xv6 Shell • Mini Shell

TECHNICAL SKILLS

- **Languages**: Python, C, C++, JavaScript, TypeScript, Bash, PHP
- **Frameworks**: FastAPI, Flask, React, Node.js, Next.js, Tailwind CSS
- **Clouds & Databases**: SQL, MongoDB, ThingSpeak, OM2M
- **Technologies**: Docker, PM2, Nginx, Apache, WordPress, Joomla! CMS
- **Developer Tools**: Git, Linux, phpMyAdmin, Postman, Arduino, VS Code

ACHIEVEMENTS & POSITIONS OF RESPONSIBILITY

- Achieved a peak rating of 1300 (Pupil) on **Codeforces**
- Selected for the **Google Summer of Code 2025** program
- Worked as a **Teaching Assistant** for the Software Systems course at IIIT Hyderabad
- Led community engagement initiatives as the **Head of Social Media** for NSS-IIITH