Nikhilesh Tiruveedula

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Education

International Institute of Information Technology, Hyderabad　　　　**Aug 2023 – Present**
Bachelor of Technology with Honors in Computer Science Engineering, CGPA: 8.23/10.00　　*Hyderabad, Telangana*

Relevant Coursework

Data Structures & Algorithms | Algorithm Analysis and Design | Operating Systems & Networks | Data & Applications | Probability & Statistics | Machine Learning & Data Science | Computer Systems Organization | Design & Analysis of Software Systems | Introduction to Software Systems | Linear Algebra | Discrete Mathematics

Experience

Software Engineering Research Center　　　　**May 2025 – Present**
Undergraduate Researcher under Prof. Raghu Reddy　　*IIIT Hyderabad, Hyderabad, India*
- Conducting research on location-specific image marker generation for ARCore using image processing techniques, aimed at improving detection accuracy and tracking performance in marker-based AR navigation systems
- Analyzing limitations of QR and fiducial markers (ARCore, Vuforia, OpenCV) and developing tools for robust, real-time marker-based navigation.

Dyadic Health　　　　**Jan 2025 – Apr 2025**
Software Developer Intern　　*Hyderabad, Telangana*
- Built cross-platform mobile app serving 200+ beta users using React Native and Spring Boot, integrating DynamoDB for 99.9% uptime and Mistral-7B LLM achieving 85% user satisfaction
- Architected AI-powered wellness tracker reducing caregiver stress by 30% through adaptive ML algorithms processing 1000+ daily health metrics for personalized recommendations

Projects

IIIT Mart — Live Demo | *MERN Stack, Google Gemini API*　　　　**Jan 2025**
- Created a full-stack e-commerce platform with 99.9% uptime for 500+ users, integrating secure JWT authentication, real-time WebSocket updates,AI-driven recommendations with 85% accuracy through Google Gemini API integration

Ticketing Platform for Fest | *MERN Stack, MongoDB, Express.js*　　　　**Jan 2025**
- Enhanced a responsive MERN stack application handling 2000+ registrations for Felicity fest across 15+ club events, reducing registration time by 60% and providing administrators with real-time analytics dashboard managing 50+ concurrent bookings

Network File System (NFS) | *C, POSIX, Socket API, Data Structures*　　　　**Nov 2024**
- Designed a distributed file system with LRU caching for 40% faster access, 99.5% redundancy via 3-server replication, and 1000+ CRUD ops/min for 100+ clients

Social Media Database Management System | *Python, MySQL, SQL*　　　　**Nov 2024**
- Engineered and deployed a comprehensive MySQL-based relational database for a social media platform, managing 10,000+ users and 50,000+ posts with optimized schema design, indexing, and analytics support, reducing query time by 70% and handling 500+ concurrent transactions.

CShell - Custom Command Line Interface | *C, POSIX, System Programming*　　　　**Aug 2024**
- Developed a robust custom shell supporting 20+ Native Shell commands, advanced features like multi-level piping, I/O redirection, and efficient history tracking of 1000+ commands with 95% Unix compatibility.

Technical Skills

Languages: Python, JavaScript, C++, C#, C, HTML/CSS, SQL, TypeScript
Developer Tools: Git, VS Code, Postman, Docker, Linux, Unity, Figma, Canva
Technologies/Frameworks: React.js, Express.js, Node.js, React Native, MySQL, MongoDB, DynamoDB, ARCore,Next.js

Achievements

- Secured All India Rank 1067 (CRL) out of 1.2 Million candidates in JEE-Mains with 99.91 percentile
- Attained All India Rank 3160 (CRL) out of 1.5 Lakh candidates in JEE-Advanced
- Merit List Awardee for Academic Excellence in Monsoon 2023 semester
- Codeforces Specialist (Max Rating: 1452) - Profile

Leadership & Extracurricular Activities

Felicity 2026 - Annual Technical Festival　　　　**Present**
Technical Team Head　　*IIIT Hyderabad*

Students' Alumini & Connect Cell (SACC)　　　　**Aug 2024 – Present**
Technical Team Member　　*IIIT Hyderabad*