

# Tarun Vuppala

Software Engineer

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## SUMMARY

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Software engineer at the intersection of backend systems, real-time infrastructure, and edge AI. Shipped three production systems from the ground up where performance was the benchmark.

## WORK EXPERIENCE

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### Unity Internet

March 2025 – June 2025

Software Developer Intern

Hyderabad, India

- Built a Premiere Pro auto-edit plugin that reduced podcast editing time from 3 hours to under 8 minutes using audio signal analysis, real-time scene switching, and overlap handling.
- Shipped production-ready cross-platform binaries adopted by 10+ podcast editors, reducing manual release overhead by 60%.

### Front Interactive Services

June 2024 – February 2025

Software Developer Intern

Hyderabad, India

- Engineered backend systems with 50+ REST API endpoints and a scalable server-side architecture.
- Worked in an Agile Scrum team of 6 engineers across 2-week sprints using TDD, reducing post-release defects by 30% and improving system stability.

## PROJECTS

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**Atlas AI** — *React Native, llama.cpp, Python, RAG*  
*Offline Multi-Expert AI System*

Feb 2026 – Apr 2026

- Built an offline-first AI chat app with on-device LLM inference using llama.cpp and a custom RAG pipeline; chunked documents into embeddings for context-aware responses for private, low-latency conversations.
- Controlled memory footprint using GGUF quantization and persistent context windows, with per-device parameter tuning that kept stable mobile TTFT between 1.5–8s.

**Acethletics** — *Next.js, Node.js, MongoDB, WebSockets*  
*Centralised Athletic Sports Platform*

Aug 2024 – Dec 2024

- Architected backend systems and database schemas that scaled to 2,000+ downloads and 1,500 peak concurrent users during live tournament usage, maintaining 100ms average API response latency across 10+ live events.
- Engineered WebSocket infrastructure delivering 200+ real-time events per match at 20ms propagation latency, with zero downtime recorded across all tournaments.
- Implemented transactional workflows with zero production data inconsistencies and standardized error handling and HTTP response across all endpoints.

## TECHNICAL SKILLS

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- **Languages:** Java, Python, JavaScript, TypeScript, SQL, C
- **Backend & Systems:** Node.js, Express.js, REST APIs, WebSockets, gRPC, Message Queues, Microservices, System Design
- **AI/ML & Data:** RAG Pipelines, LLM Inference, llama.cpp, On-device AI, Vector Embeddings, Semantic Search
- **Frontend:** React.js, Next.js, React Native, Tailwind, GSAP
- **Databases:** PostgreSQL, MySQL, MongoDB, Redis
- **Tools & Cloud:** Git, GitHub, Docker, AWS, CI/CD, Postman, Linux

## EDUCATION

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ACE Engineering College

Hyderabad, India

B.Tech in Computer Science and Engineering

Nov 2022 – Apr 2026

## ACHIEVEMENTS

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- **TEDx ACEEC Co-Organizer:** Managed speaker outreach, sponsorships, and full event coordination.
- **UiPath Hack-a-Bot 2023:** Runner-Up for developing a Robotic Process Automation (RPA) solution.
- **AICTE Yukti 2023:** National Finalist for submitting an innovative startup idea.
- **Certifications:** Cisco Python Essentials, Cisco CCNA, Smart Interviews Advanced DSA, Wipro TalentNext Full-Stack Java.
- **GATE 2025:** Qualified GATE 2025 in Computer Science.