Varun D Magar

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Education

National Institute of Engineering, Mysuru Sep. 2023 – June 2027 (Expected)
B.E. in Computer Science and Engineering | CGPA: 8.95/10.0
Coursework: Data Structures & Algorithms, Operating Systems, Computer Networks, DBMS, Distributed Systems, Object-Oriented Design, Software Engineering, Machine Learning

Technical Skills

Languages: Python, Java, C++, JavaScript, SQL
Backend & Systems: Node.js, Express.js, REST APIs, Microservices, Concurrency, Caching, Rate Limiting, JWT, RBAC
Frontend: React.js, Redux, HTML/CSS
Databases: MongoDB (Aggregation Pipelines), MySQL
Cloud & DevOps: AWS (EC2, S3, IAM), Docker, GitHub Actions (CI/CD), Linux, Git
AI / ML: Deep Learning (Neural Networks), NLP (Tokenization, Word Embeddings, NLTK), Transformers, LLM Integration (Gemini), LangChain, LangGraph, RAG, Prompt Engineering
Testing & Automation: Jest (Automated Regression Testing), CI/CD with GitHub Actions, n8n Workflow Automation

Project Experience

PrintBridge – Cloud-to-Edge Remote Printing System May 2026
Backend Engineer | Node.js, Express, Sharp, PDFKit, ThingSpeak | 4-Member Team *Live | GitHub*

- Reduced end-to-end remote print latency to under 30 seconds by architecting a Node.js/Express cloud backend that dispatches jobs through an automated queue to a local edge daemon in real time.
- Designed a fault-tolerant edge agent with multi-OS driver fallbacks, mutex locks to eliminate race conditions on shared hardware, and exponential-backoff retries for resilience under concurrent load.
- Eliminated server out-of-memory crashes with a stream-based rendering pipeline and zero-retention file lifecycle; instrumented real-time health monitoring via ThingSpeak telemetry.

Digital Democracy – AI-Powered Civic Engagement Platform Sep. 2025 – Dec. 2025
Backend Engineer | MERN Stack, Gemini AI, Docker, Jest | 4-Member Team *Live*

- Cut server memory use and network payload by offloading admin analytics from the single-threaded Node.js event loop to native MongoDB aggregation pipelines.
- Designed a 48-hour rolling time-decay trending algorithm and infinite-depth comment threading (adjacency-list pattern), overcoming NoSQL document-size limits.
- Built an RBAC-secured moderation engine with bulk-resolution tools; containerized services with Docker and automated Jest regression tests in a GitHub Actions CI pipeline.

VSKript – Full-Stack Blogging Platform Dec. 2025 – Mar. 2026
Full-Stack Developer | React, Redux, Node.js, MongoDB, JWT | 3-Member Team *Live*

- Improved API response latency by 40% via selective data population; built a zero-disk-footprint media pipeline with on-the-fly stream compression and Cloudinary CDN delivery.
- Engineered a race-condition-safe, privacy-first analytics engine using cryptographic visitor hashing, atomic DB operations, and connection pooling; built a reusable React activity-heatmap component.

Streak Card 23 – Dynamic SVG Generator
Backend Developer | Node.js, Express, SVG, REST APIs *Live | GitHub*

- Served 2,000+ dynamic developer widgets from a Node.js microservice that aggregates cross-platform time-series metrics into on-the-fly SVGs, using HTTP caching to stay within upstream API rate limits.

Above Influence – AI-Powered Wellness & Analytics Tool
Full-Stack & AI Engineer | React, n8n, Gemini AI, LangChain | 3-Member Team *Live | GitHub*

- Built a LangChain-based LLM orchestration engine with a 3-tier fallback pipeline that distills raw API data into key behavioral signals, reducing token usage while computing 0–100% goal-alignment scores and automated risk ratings.

Achievements

- **LeetCode Knight (Top 5% globally)**: peak rating 2116; 700+ problems solved; 650+ day active coding streak.
- **IoT Project Expo 2026:** 3rd place among 25+ teams for PrintBridge (Institution's Innovation Council, AICTE).
- **Innovista 2.0:** Bronze medal (3rd place) among 50+ teams at National Institute of Engineering, Mysuru.
- Published 20+ technical articles on backend engineering, system design, and web development (VSKript).
- IBM DevOps and Software Engineering Certificate (Coursera), verified on Credly.