

Ashutosh Mathore

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Skills

Languages & Frameworks	TypeScript, JavaScript, HTML5, CSS3, React, Next.js, Node.js, Express.js, React Native, Go, Tailwind CSS
APIs & Architecture	REST API design & security (JWT, OAuth2), GraphQL, WebSockets, microservices, distributed systems
Infrastructure & DevOps	Docker, Kubernetes, Helm, AWS, GitHub Actions, CI/CD, Nginx, Git, Agile
Databases & Tools	PostgreSQL, Redis, MongoDB, Prisma, Drizzle ORM, Supabase

Experience

Software Engineer Intern | USC Information Sciences Institute Los Angeles, CA | June 2025 - May 2026

- Built end-to-end local XDC container solution in Go for NSF-funded SPHERE testbed: auto-generated WireGuard VPN configs, dynamic IP assignment, DNS setup, and REST API integration - enabling 32 organizations and 800+ researchers to run experiments on local compute, offloading ~1,000 cloud-hosted XDCs.
- Extended the full-stack SPHERE portal (React / Go / PostgreSQL / Kubernetes / Helm) with new researcher-facing features and REST API improvements for a platform serving the global cybersecurity research community.

Founder & Lead Engineer | Netnimbus Nanded, India | May 2023 - Aug 2024

- Founded and scaled a software agency to 3 engineers, delivering 12+ products for clients including American Tourister and research firms across the US and India.
- Architected and shipped Right Sight Research, a B2B research reports marketplace (Next.js / Node.js / PostgreSQL) with end-to-end auth, payments, and content delivery.
- Built *AlgoGravity*, an algorithmic trading platform using WebSockets and GraphQL for real-time data; backtested strategies on 5+ years of market data with consistent positive simulation returns.

Software Engineer | Azympo Bengaluru, India | May 2023 - Jan 2024

- Engineered a full YouTube-style nested comment system with interactive overlay UX for Razzl (React Native / TypeScript video streaming app), directly increasing user session depth and engagement.
- Maintained the React/TypeScript upload portal interfacing with a Node.js/Express.js backend, sustaining a reliable high-throughput content ingestion pipeline.

Full Stack Developer Intern | Mithya Labs Dharamshala, India | Jan 2022 - July 2022

- Led end-to-end development of *Kno Pro* (Next.js, TypeScript, Node.js, Contentful CMS), an incentivized learning platform shipped on time with zero post-launch critical bugs.
- Independently owned feature delivery for *Playground App*, a Web3 social platform, progressing from bug fixes to building full pages within 6 weeks of joining.

Projects

Kardashev Labs | Open-Source US Grid Intelligence Platform [Live](#) | [GitHub](#)

- Built and operate a suite of full-stack web apps surfacing US energy-grid data, including an Interconnection Queue Tracker unifying all 7 ISO/RTO queues (ERCOT, MISO, PJM, CAISO, SPP, NYISO, ISO-NE) - the interconnection data large-load and data-center projects use to track grid access.
- Designed the backend: REST APIs (Node.js / FastAPI) over a PostgreSQL datastore, containerized with Docker and shipped via automated GitHub Actions CI/CD; real-time demand pipeline runs on Redis Streams and Kubernetes microservices across 15 balancing authorities.

AuditQuant | Hybrid Smart Contract Security Auditing [GitHub](#)

- Combined Slither, Mythril, and Oyente with a constrained LLM summarization layer for DeFi vulnerability detection - achieved 66% F1 (vs. 52% Mythril, 19% ChatGPT-only) and cut unverified LLM claims by 50%; built a risk-scoring engine mapping findings to financial exposure.

Publications

WEBIST 2025 (Peer-Reviewed) | *A Long Short-Term Memory (LSTM) Neural Architecture for Presaging Stock Prices* | achieved $R^2 > 0.93$ on AAPL, GOOG, META, TSLA; RMSE 3.42 on Apple vs. 13.60 for ARIMA (4x improvement). [DOI](#)

Education

California State University, Sacramento MS in Computer Science	Aug 2024 - May 2026
Veermata Jijabai Technological Institute Master of Computer Applications	Jan 2021 - Feb 2023
SSBES' Institute of Technology and Management Bachelor of Computer Applications	May 2017 - May 2021