Shyam Sundhar Ganesh

+61 481 686 159 | shyamsundhar2435@gmail.com | Sydney, NSW, Australia
shyamsundhar.com | linkedin.com/in/shyamsundhar2435 | github.com/ShyamSundhar1411

Education

The University of Sydney — **Feb. 2026 – Present**
*Master of Computer Science (Spl. in Data Science and Software Engineering) - **90.5 (WAM)*** — *Sydney, Australia*

Vellore Institute of Technology, Chennai — **Sep. 2021 – Jul. 2025**
*Bachelor of Technology in Computer Science and Engineering (Spl. in AI and Robotics) - **9.29/10*** — *Chennai, India*

Indian Institute of Technology, Madras (Concurrent) — **Sep. 2021 – Jun. 2025**
*Bachelor of Science in Data Science and Applications - **8.5/10*** — *Chennai, India*

Experience

Voxket.ai — **Remote**
Founding Engineer — *Jun. 2025 – Present*

- Cut query latency by **85% (1000ms → 150ms)** by engineering **Cortex**, a production **RAG** pipeline powering real-time voice and chat agents used by **India's largest public-sector banks**.
- Tripled voice-agent scalability (**3**×) by designing **AI-Orchestrator**, a **Temporal**-backed workflow queue on **FastAPI** coordinating ingestion, summary evaluation, lead generation and campaign scheduling.
- Designed and built **VoxPulse**, a **WebSocket** voice-agent layer enabling real-time third-party telephony integration (SIP trunking, IVR), adopted by **enterprise clients across banking and automotive** sectors.

Indian Institute of Technology, Madras — **Chennai, India**
Software Development Engineer (Contract) — *May 2025 – Jan. 2026*

- Rebuilt IIT Madras's institute-wide **academic workflow system**, migrating a **2005 PHP/C#/SQL Server** stack to modular **Django** with **LDAP** authentication, **state-machine**-driven approval logic and authority-based task routing.
- Designed the new **PostgreSQL** schemas and built **ETL** pipelines to transform and migrate two decades of legacy data, cutting upload and retrieval latency by **45%**.

Ministry of Electronics and Information Technology (MeitY) – Govt. of India — **Chennai, India**
Backend Developer Intern — *Dec. 2023 – Mar. 2025*

- Architected and built the **complete backend** for a government **e-learning platform** serving **50,000+ concurrent users** — course management, identity and authentication, and **REST APIs** on **Django** with optimised **PostgreSQL** schemas.
- Built **AI proctoring** pipelines handling real-time video streaming, model inference and annotation, on an async **FastAPI** backend designed for high concurrency.

Projects

- **Git Automater – Interactive Git CLI** (Rust): Reached **10,000+ downloads on crates.io** (v2.0) by building a fuzzy-search Git CLI with **10 nested operations** — guided conventional commits, licence generation via the **GitHub API**, multi-language `.gitignore` via **gitignore.io**, and dedicated branch and remote managers.
- **Structura – Cross-Language Project Scaffolding CLI** (Go, Python): Cut backend project setup time by **70%** with cross-platform CLIs (**2,000+ downloads**) that scaffold production-ready services across **4 architecture patterns** and **6 frameworks**, with **uv**/Poetry environment setup, Git initialisation and extensible **YAML** templates.
- **Faculty Review System – Feedback & Analytics Platform** (Django, PostgreSQL, GCP): Served **7,000+ students** by building a feedback and analytics platform with **OAuth2**-secured access, structured data collection and personalised dashboards, deployed on **GCP** for reliability at peak review periods.
- **My Go Playground - Open-Source Systems Engineering Reference** (Go): Built an open-source Go reference implementing **production reliability primitives** from first principles including rate limiters, **circuit breakers**, retries with backoff and backpressure, each with tradeoff analysis and tests.

Technical Skills

Programming Languages: Python, Java, Go, Kotlin, Rust, C/C++, SQL
Frameworks: Django, Flask, FastAPI, Express.js, Spring Boot, LangGraph, Scikit-learn, TensorFlow, PyTorch
Databases: PostgreSQL, MongoDB, MySQL, Redis, Neo4j
Other Technologies: Git, AWS, GCP, Azure, Linux, Docker, Celery, Temporal, Jira

Publications, Patents & Certifications

Publications: 4 peer-reviewed - research in **federated learning, graph neural networks, computer vision** and time-series forecasting (IEEE Access, Frontiers in Plant Science, Environmental Science Europe; Scientific Reports under review). ORCID: 0009-0003-8930-1204
Patents: Dental-Insight Glove (utility, under review); DriveGuard Smart Safety System (utility); Automated Postal Stamping Machine (design, published)
Certifications: AWS Solutions Architect - Associate, TensorFlow Developer, PCAP - Python Institute