

Tejas Gupta

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Education

Arizona State University

B.S. Computer Science, Minor in Business — **GPA 3.89/4.0**

Tempe, AZ

Expected May 2027

Honors: Dean's List (4x), New American University Scholar

Relevant coursework: Data Structures, Algorithms, Operating Systems, Databases, AI/ML, Distributed Systems

Experience

GlobalLogic (Hitachi Group)

May 2025 – Aug 2025

Software Engineering Intern

Remote

- Revamped the data validation pipeline for an internal analytics tool, reducing data error triage time from 3 hours to 30 minutes per week by automating schema checks and anomaly detection with **Python**.
- Helped migrate a monolithic backend to a microservices architecture, reducing API response latency from 800 ms to 150 ms on **Java Spring Boot** and **REST APIs**.
- Enhanced the internal reporting dashboard, reducing report generation time from 5 minutes to 45 seconds by refining SQL query patterns and batching via **TypeScript**.
- Standardized Docker-based CI/CD, reducing deployment turnaround time by 25 minutes per build through **Docker**, **AWS EKS**, and **Jenkins**.

EPICS Lab (Arizona State University)

Jan 2024 – May 2024

Undergraduate Research Lead

Tempe, AZ

- Saved the engineering team 15+ hours per week in debugging time by architecting drivers for GPS and sensor modules on an autonomous medical drone with **C/C++** and embedded systems.
- Boosted sensor processing speed by 25%, cutting the control-cycle time from 20 ms to 15 ms by optimizing memory layout and servicing hardware interrupts directly with **C++** and an RTOS.

Technical Projects

WashedMCP – NexHacks Winner

Jan 2026

Python, TypeScript, MCP, LeanMCP, Tree-sitter, Sentence Transformers, ChromaDB | Live | GitHub

- Built a token-efficient semantic code search MCP server that returns full code context in a single search, including the best matching symbol, its callers, callees, and relevant file neighbors.
- Reduced context size from **331k** tokens to **71k** tokens on a **1,000+ file** codebase using a token-optimized output format (TOON), while preserving retrieval quality on **LongBench** benchmarks.
- Implemented dual storage with custom vector embeddings alongside **ChromaDB** to support fast semantic retrieval and graph-based context expansion.

CarbonCompass – HackHarvard Winner

Oct 2025

Python, Cloudflare Workers, scikit-learn, Gemini API | Live | GitHub

- Streamlined a serverless geospatial scoring API for low-carbon storefront siting to handle 10k+ concurrent queries, cutting average latency from 200 ms to 45 ms by running compute at the edge with **Python** and **Cloudflare Workers**.
- Developed an **ML-based** sustainability ranking model that flags energy-inefficient buildings across 500+ properties, reaching 92% accuracy with **scikit-learn**.
- Designed a 3D thermal analysis feature using the **Gemini API** to visualize heat leaks and estimate potential annual savings per building.

DocIQ – AI Document Workflow

Jul 2025 – Aug 2025

React, Spring Boot, Python, Weaviate, LangChain, OpenAI API | Live | GitHub

- Developed a production document workflow (upload, OCR, indexing, analytics) that sustained 1,000+ pages/min.
- Refined semantic search by indexing embeddings in **Weaviate** and reranking results to keep queries sub-200 ms across 1,000+ documents.
- Added **Google OAuth** authentication and session persistence for beta users.

AutoMatch – Distributed Data Pipeline

Sep 2025

Python, Redis, TensorFlow, FastAPI | GitHub

- Established a used-car ingestion pipeline that processes 1M+ listings daily, cutting duplicate ingestion by 90% by caching and idempotent writes with **Redis**.
- Introduced a recommendation service that serves personalized matches in under 100 ms with **TensorFlow** and **FastAPI**.

Skills

Languages: Python, Java, C/C++, TypeScript, JavaScript, SQL, Bash

Frameworks/Libraries: React, Spring Boot, Flask, FastAPI, TensorFlow, PyTorch, scikit-learn, LangChain, Weaviate

Tools/Platforms: AWS (EKS, Lambda, S3), Docker, Kubernetes, Jenkins, GitHub Actions, CI/CD, Redis, PostgreSQL, MongoDB, Git, Linux/Unix, REST APIs, OpenAI API, RAG, embeddings