

Shivanya Chandra

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EDUCATION

Purdue University (West Lafayette, IN) | GPA: 3.57/4.00 | Dean's List

Aug 2023 - May 2027

B.S. Computer Science & B.S. Artificial Intelligence | Minor: Psychology | Certificate: Entrepreneurship and Innovation

EXPERIENCE

Software Engineering Intern

June 2026 – Aug 2026

Nokia

Sunnyvale, CA

- Architected OTel-ready observability framework for Nokia backend across BHOM, annotation, and postback.
- Enabled 30-second failure visibility across 15+ pipeline states and 10+ health signals, converting 12 app events, 1 LLM event, and 6 BHOM query classes into a reusable production triage layer.

Artificial Intelligence Researcher

Aug 2025 – Dec 2025

Purdue University

West Lafayette, IN

- Designed a RAG evaluation framework to study hallucination, retrieval precision, answer faithfulness, and citation reliability across 4,800 generated responses, cutting manual QA review time by 70%.
- Benchmarked chunking, embeddings, top-k retrieval, reranking, and prompt strategies across 1,200 QA pairs, improving context precision from 0.61 to 0.84.

Software Engineering Intern

June 2025 – Aug 2025

Genpact

New York, NY

- Shipped Spring/Kafka workflow platform processing 120K+ invoice, claims, vendor, and compliance events.
- Reduced manual exception routing effort by 55% and cut resolution time from 3.2 days to 1.4 days through SLA-aware routing, duplicate detection, audit logging, and AI-assisted case resolution.

Machine Learning Researcher

Jan 2025 – April 2025

Purdue University

West Lafayette, IN

- Studied real-time hazard detection across 15K+ IoT events/hour, classifying risks/anomalies under 2s p95 latency.
- Improved hazard F1 to 0.89, cut false alerts by 32%, and increased sensor reliability visibility by 40% through confidence scoring, signal validation, zone criticality, and device-health analysis.

Software Engineering Intern

Oct 2024 – May 2026

Health and Human Sciences

West Lafayette, IN

- Reworked participant study setup across 1,000+ monthly records, saving 3–4 staff hours/week in access fixes.
- Automated grading support, cutting review effort by 40% and API spend by 25% via rubric-based LLM evals.

Undergraduate Researcher

Aug 2024 – Dec 2024

Purdue University

West Lafayette, IN

- Researched RRT*, inverse kinematics, and PID control for autonomous robotic arm trajectory generation.
- Translated motion-planning research into a robotic arm pipeline using RRT*, spatial data structures, PID tuning, and inverse kinematics, reducing oscillations and achieving 95%+ successful pick-and-place trials.

Undergraduate Teaching Assistant

Aug 2024 – May 2026

Purdue University - CS 180 (OOP in Java)

West Lafayette, IN

- Led CS180 labs and office hours for 20+ students, providing hands-on guidance in Java, debugging, and OOP.
- Reviewed 100+ Java assignments per semester, identifying recurring bugs in OOP design and debugging workflows.

PROJECTS

Custom Unix Shell | C/C++, POSIX, Flex, Bison

Mar 2026 – Jul 2026

- Built a C/C++ shell with Flex/Bison, POSIX APIs, and 15+ I/O, jobs, expansion, and history features.
- Implemented 10+ POSIX calls for fork/exec, 4+ command pipelines, 6+ redirection modes, and signal-safe foreground/background job control, passing 96%+ test cases after GDB/Valgrind debugging.

RouteWise | Python, FastAPI, LiteLLM, Redis, PostgreSQL

Sept 2025 – Dec 2025

- Created a cost-aware LLM routing gateway with FastAPI, LiteLLM, Redis, PostgreSQL, and local Llama models, routing 10K+ requests across small, medium, and frontier models.
- Reduced inference cost by 52% and prompt tokens by 41% while maintaining 90%+ answer quality through semantic caching, prompt compression, dynamic routing, and quality-based fallbacks.

TECHNICAL SKILLS

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

Systems & Backend: Linux, POSIX APIs, Node.js/Express, REST APIs, MongoDB, MySQL, Kafka, FastAPI, Redis

AI/ML & Tools: PyTorch, TensorFlow, NumPy, Pandas, GDB, Valgrind, JUnit, Git/GitHub, LiteLLM, Flex/Bison