

SHREEJA SINGH

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Education

Illinois Institute of Technology

Master of Science in Computer Science | GPA: 3.6/4.0

Aug 2025 – May 2027

Chicago, IL

Bangalore Institute of Technology

B.Tech in Electronics and Communication Engineering | GPA: 4.0/4.0

Nov 2020 – Jun 2024

Bengaluru, India

Algorithms & Competitive Programming: 400+ DSA problems solved on LeetCode and GeeksforGeeks | **All India Rank 1276**, CodeKaze National Coding Championship

Certification: Claude Certified Developer – Foundations, Anthropic

Work Experience

Aion Labs

May 2026 – Present

AI Engineer Co-op – Python | Next.js/TypeScript | Three.js | Data Pipelines | Testing

Chicago, IL

- **Shipped 16+ peer-reviewed production PRs** across a 3-repo AI data platform: a **Python** data pipeline (370 tracked artifacts) and a **Next.js/TypeScript/Three.js** 3D front end, spanning engine fixes, data tooling, and live data refreshes.
- **Diagnosed and fixed 5 production defects in a Three.js/React 3D engine** (camera controls, LOD visibility thresholds, raycast hit priority, an infinite render-loop crash) and **built its camera fly-to feature**, restoring a parked engine to promotion-ready state.
- Built **3 unit-tested Python data-quality tools** (staleness reporting, config-driven checks, release reconciliation) now gating pipeline releases; **the checker caught a million-fold unit error in production data on its first run**, which I traced upstream and fixed with a guarded parser and regression tests.
- Ran the platform's **first live data refreshes in 75+ days across 5 dataset families** (SEC filings, LBNL grid queues, ERCOT PDF reports, token-price APIs), cutting stale artifacts **371 → 252**; added a **pure-Python PDF-extraction fallback** fixing a recurring runner failure.

Microchip Technology

Feb 2024 – Jul 2025

Software Engineer (Quality) – Python | AI/NLP | API Integration | SDLC | Agile/Scrum

Bengaluru, India

- Built and maintained a **production Python-based NLP chatbot** used by a **50-engineer team**, reducing manual engineering-information search time by **40%**.
- **Integrated the chatbot with 4 enterprise systems** (ASPICE, JIRA, POLARION, CAD) using **API calls**, developing Python workflows for data retrieval and processing across **5+ production releases**.

Projects

Autonomous Multi-Agent System | Python, FastAPI, REST, ChromaDB, GitHub Actions

Jan 2026 – Mar 2026

- Designed an **8-service routing architecture** behind a **FastAPI REST API** with intent-based request routing across 4 paths; automated build, test and deploy via **GitHub Actions CI/CD**.
- Wrote an **automated test harness** over **5 benchmarked scenarios** tracking quality and latency; **root-caused a scoring defect** that was masking regressions.

Flight Delay Prediction at Scale | PySpark, Spark MLlib, TensorFlow, AWS SageMaker/EMR

Apr 2026 – May 2026

- **5-person team: 7-phase distributed PySpark pipeline** over **6.96M records** on **AWS EMR**; owned the **TensorFlow** track, where gradient boosting (**84.67% acc**) beat the DNN at **3.3× faster training**.

Stock Research Agent on MCP | Python, Model Context Protocol, FastMCP, Pydantic

Aug 2026 – Present

- Designed a **3-server service architecture** on the **Model Context Protocol**, one host holding a dedicated client per server; shipped the market-data service with **typed schemas** auto-derived from Pydantic definitions.

Technical Skills

Languages: Java, Python, C, TypeScript, JavaScript, SQL, HTML/CSS

Front-End: Next.js, React, TypeScript, Three.js, Tailwind, shadcn/ui, Recharts, Responsive UI

Back-End & Data: REST API Design, FastAPI, PostgreSQL, Data Pipelines, Data-Quality Tooling, PySpark, Docker

Engineering: OOP, Data Structures & Algorithms, Unit/Regression Testing, Code Review, CI/CD, Git, Agile, Linux

Cloud & AI: AWS (Bedrock, SageMaker, EMR, EC2, IAM, VPC), LLM Applications, RAG, MCP, Vector Retrieval