Ahan Jain

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EDUCATION

Northeastern University   **Boston, MA**
B.S. in Computer Science, Honors Program   *Expected Graduation, May 2027*
- **Concentration:** Artificial Intelligence
- **GPA:** 3.72/4.00, *Dean's List*
- **Related Coursework:** Machine Learning and Data Mining 1, Artificial Intelligence, Algorithms and Data, Introduction to Databases, Computer Systems, Object Oriented Design, Theory of Computation

EXPERIENCE

Darby   **Boston, MA**
AI Engineer Co-op   *July 2025 – Dec 2025*
- Built and maintained Medicare coverage microservices using Spring Boot, Node.js, FAISS semantic search and LLM APIs (Claude) that processed 6,850+ policies, reducing manual research by 99% with 95%+ deterministic resolution and improving reliability through CI/CD workflows and unit test coverage.
- Designed and shipped a real-time admin-facing analytics platform for 15+ organizations using Angular, Spring Boot, PostgreSQL, and JWT-based auth with refresh-token rotation, enabling customer health scoring, usage intelligence, expansion opportunity detection, and churn risk mitigation.

Oasis NEU   **Boston, MA**
Software Engineer   *Jan 2024 – April 2024*
- Built "Husky Laundry" as part of a 4-person team using React, Flask, and Python pipelines, enabling real-time laundry machine availability for hundreds of students across 20 dorms.
- Developed backend components in Python to scrape laundry machine data, process status updates, and serve real-time availability information to the React frontend.

Net Solutions   **Remote**
Software Engineering Intern   *May 2021 – June 2021*
- Used Flask and the Spotify Web API to build a web app that let users explore artists, albums, and audio features such as tempo and energy.
- Implemented a Python backend with dynamic endpoints and JSON parsing to deliver interactive song-level insights and visualizations.

PROJECTS

OpsPilot: Autonomous Agent with Model Context Protocol Integration   **Boston, MA**
Independent Project   *Dec 2025 – Jan 2026*
- Built autonomous operations agent with explicit state machine (Plan-Execute-Evaluate) using Claude API and FastAPI, integrated Model Context Protocol (MCP) for dynamic tool discovery, exposing 7 tools via Node.js MCP server for standardized interoperability across operations and filesystem domains
- Implemented approval workflows for high-risk operations and Redis-backed exponential backoff retry logic, achieving reliable multi-step automation with complete audit trail in SQLite for debugging and safety analysis

InsightHub: AI-Powered Field Intelligence Platform   **Boston, MA**
Independent Project   *Nov 2025 – Dec 2025*
- Developed a multi-model computer vision pipeline integrating 5 specialized YOLO v8 detectors (general, PPE, helmet, infrastructure, fire) achieving 85-90% detection rate for real-time detection of safety violations, equipment compliance, and infrastructure damage across 10+ object classes.
- Architected a full-stack platform using Next.js, FastAPI, and offline-first PWA with IndexedDB for zero-connectivity operations, automated PDF report generation with ReportLab, GPS geo-tagging with Leaflet maps, and analytics dashboard tracking compliance trends and critical violations.

SKILLS

Languages: Python, Java, C, JavaScript, TypeScript, SQL, Elixir, R, Racket, Assembly

Frameworks & Libraries: Spring Boot, Node.js, Angular, React, Flask, Express.js, FastAPI, TensorFlow, scikit-learn, Ultralytics YOLO, Pandas, NumPy, Matplotlib, Keras, NLTK, Recharts, Leaflet, ReportLab

Tools & Platforms: Git, Docker, PostgreSQL, Redis, Jupyter Notebook, IntelliJ, VS Code, Claude API, OpenAI API