

# Donovan McHenry

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## EDUCATION

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### New Jersey Institute of Technology

*B.S. in Computer Science*

Newark, New Jersey

*Expected Graduation, May 2027*

**Relevant Coursework:** Intensive Programming in Linux; **Programs:** CodePath WEB101 (Honors), ColorStack

## TECHNICAL SKILLS

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

**Full Stack:** React, Next.js, MUI, Zustand, Node.js, Express, Flask, FastAPI, REST APIs, GraphQL/Apollo

**AI & Data:** Claude API, LLM evaluation, RAG, MCP, tool calling, agent orchestration, OpenSearch, Langfuse

**Engineering:** Data structures, algorithms, object-oriented design, Linux, AWS, Docker, Git, GitHub Actions, CI/CD, automated testing

## EXPERIENCE

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### Universal Music Group

*Software Engineer Intern*

New York, New York

*June 2026 – August 2026*

- Built an authenticated Python/Flask REST evaluation platform for an LLM-powered discovery service, automating 60 cases across 19 categories with scoring, latency tracking, regression comparisons, reproducible reports, and 22 framework tests.
- Debugged OpenSearch exact-match and normalization failures in model-generated search plans; developed a deterministic resolution layer that raised pass rate from 60% (18/30) to 90% (27/30) with 9 improvements and 0 regressions.
- Reduced initial JavaScript for an enterprise React search interface by 23.4% (207.34 KB to 158.79 KB gzip) through code splitting and render optimization.
- Developed a Python telemetry pipeline and Flask/React dashboard over Langfuse traces, surfacing cost, p50/p90/p95 latency, bottlenecks, and source-trace drilldowns with sanitized data and human-review safeguards.
- Implemented Microsoft Entra OAuth 2.0 authentication with PKCE without storing client secrets or tokens; documented testing, review, and maintenance workflows for secure team handoff.

### Anthropic

*Claude Campus Ambassador*

Newark, New Jersey

*August 2025 – May 2026*

- Taught 100+ students AI application development, including RAG pipelines, MCP servers, tool calling, structured outputs, and multi-step agent orchestration using Python and TypeScript.
- Founded and led NJIT's Claude Builder Club as President; partnered with Anthropic technical staff to organize workshops and hackathons where students built, tested, and presented end-to-end applications.

### Obsidian Security

*Software Engineer Intern*

Remote

*July 2025 – August 2025*

- Owned end-to-end delivery of Enterprise Deployment Options for parameterized Windows installs through React, TypeScript, MUI, and Apollo admin controls; the feature became the default enterprise installation path.
- Re-architected enterprise downloads to native GET navigation, eliminating 100% of POST/JSON paths and all fetch calls to simplify code and improve reliability across corporate proxies and VPNs.
- Built an end-to-end validation harness in Node.js, Express, and Bash covering all 4 configuration combinations with ZIP signature and PowerShell checks; caught integration issues before release and enabled repeatable testing.

## PROJECTS

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### NJIT Schedule Pro

June 2025 – Present

- Built a Dockerized Next.js and FastAPI course-scheduling application used by 800+ students; implemented a backtracking constraint solver with fail-fast pruning.
- Designed a reusable, type-safe full-stack architecture with Pydantic and TypeScript/Zustand; shipped ICS/CSV exports and an interactive calendar with multi-field filtering.
- Integrated the Claude API to translate natural-language preferences into validated constraints and reject conflicts across availability, delivery mode, time blocks, and credit limits.