

# Logan M. Ponik

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## EDUCATION

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**University of Delaware** | B.S. in Computer Science, Concentration: AI & Robotics | *Expected May 2026*

**Coursework:** Data Structures, Algorithms, Software Engineering, Database Systems, Machine Learning, Parallel Programming, Artificial Intelligence, Data Mining, Computer Vision, Linear Algebra, Discrete Mathematics

## SKILLS

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**Languages:** TypeScript/JavaScript, Python, Java, SQL, C++, C, R

**Frameworks & Libraries:** Next.js, React, FastAPI, Flask, LangChain, LangGraph, pandas, NumPy

**Tools:** Docker, Git, Postman

## PROFESSIONAL EXPERIENCE

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**Axe.ai**

June 2025 – August 2025

*Software Development Intern*

- Developed front-end features for a production desktop app (React, Tauri, Docker), including re-engineering a legacy notification system to restore real-time toast alerts for end users.
- Designed and shipped an interactive real-time flow diagram (React Flow) to visualize system architecture, reducing onboarding friction and improving cross-team alignment during sprint reviews.
- Collaborated in an Agile environment with weekly sprints, contributing to code reviews and maintaining component documentation for a cross-functional engineering team.

## PROJECTS

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**researchpp**

*Individual* | Python, LangGraph, LangSmith, OpenAI, Tavily

- Architected a retrieval-grounded multi-agent LLM pipeline (plan → retrieve → extract → write → review) with conditional retry logic, using a shared typed state and Pydantic schemas to enforce structured outputs and consistency across stages.
- Implemented concurrent web retrieval and evidence extraction (ThreadPoolExecutor, 8 workers) across planner-generated subquestions, reducing end-to-end runtime from 162s to ~70s (2.3x speedup, 57% faster) with fault isolation per task.
- Built production-ready AI infrastructure with a Typer/Rich CLI, LangSmith tracing, deterministic source attribution, and persisted JSON/Markdown artifacts, enabling full observability, debugging, and reproducibility of agent workflows.

**Terris**

*Individual* | Next.js, TypeScript, FastAPI, scikit-learn, Python

- Engineered and deployed a full-stack geospatial screening platform integrating 4 federal EPA datasets into a searchable, normalized index of 49K+ environmental sites.
- Built a data pipeline that processed 5.2M+ raw records, transforming them into a production-ready geospatial dataset through rule-based filtering and normalization.
- Designed low-latency scoring and reporting APIs with startup-loaded BallTree spatial indexes.

**Foliage**

*Team Member* | Next.js, TypeScript, Supabase, FastAPI

- Architected a full-stack pipeline that parses uploaded resumes (PDF/DOCX) via LLM extraction, transforms content into structured data, and auto-generates personalized portfolio pages.
- Implemented Supabase Auth with guarded route workflows across 5 views (upload, template, preview, profile, customization), enforcing session-aware redirects and zero unauthorized access paths.
- Built a composable template system with live preview, color/theme controls, and data-driven section rendering to support rapid portfolio generation from a single source model.

## LEADERSHIP

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**Academic Chair** | *Phi Kappa Sigma* | April 2024 – April 2025

- Mentored 70+ chapter members on academic planning and accountability, contributing to a 15% increase in average chapter GPA over the term.