Daniel Boehme

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EDUCATION

Community College of Allegheny County New York, NY– May 2025
Associates of Science – Computer Information Systems, GPA: 3.7
Relevant Coursework: Data Structures, Algorithms, Database Systems, Computer Architecture, Software Engineering

Columbia University, School of General Studies New York, NY– May 2027
Bachelor of Arts – Computer Science-Mathematics, GPA: 3.7
Relevant Coursework: Advanced Programming, Web Development, Linear Algebra, Systems Analysis & Design, Networking Fundamentals

SKILLS

Languages: C++, C, JavaScript, SQL, Python, NeoVim, Bash
Web Development: HTML, CSS, React.js, Node.js
Data Tools: Pandas, NumPy, SQLite, PostgreSQL
Prompt Engineering: Claude, Open Code, Codex
Languages: English (fluent), Traditional Chinese (conversational)

PERSONAL PROJECTS

Abel **— AI-Native Knowledge & Agent Platform**
New York, NY– April 2026

- Outlined and developed an AI-native platform centered around an interactive "Atlas of Being" knowledge graph, building dynamic React/TypeScript visualization systems with animated node relationships, progression mechanics, semantic memory, and real-time graph interaction pipelines
- Engineered modular AI infrastructure for retrieval-augmented generation (RAG), autonomous agent orchestration, workflow automation, and multimodal research ingestion; developed companion systems including Theib, an automated research and code-intelligence tool for repository analysis, technical documentation retrieval, and implementation discovery
- Designed scalable local-first backend and tooling architecture integrating vector retrieval, contextual memory systems, semantic search, and extensible agent workflows to support rapid experimentation in next-generation human-AI interaction systems

Distributed Cache System
New York, NY– August 2025

- Built a high-performance, Redis-like distributed in-memory cache in Go, supporting concurrent client connections over TCP
- Implemented core cache features including GET/SET commands, TTL-based expiration, and configurable LRU eviction
- Designed a thread-safe caching architecture using read-write mutexes and background goroutines for expired key cleanup
- Developed an append-only persistence mechanism (AOF) with periodic disk flush and command replay for fault recovery
- Added performance metrics (hits, misses, hit rate) and implemented lightweight text-based client-server protocol for simplicity and extensibility

SOFTWARE ENGINEERING EXPERIENCE

Columbia University New York, NY
Industrial Engineering and Operations Research Intern September 2025 – Present

- Built Google Apps Script tools to scrape event and attendance data from departmental websites and store them in Google Sheets for tracking and reporting
- Automated email workflows via Google Sheets + Apps Script integration, enabling batch communication to students and faculty with personalized message templates
- Streamlined internal data management by designing reusable scripts and optimizing existing spreadsheet infrastructure for scalability and maintainability

ACTIVITIES

Columbia University Space Initiative, *Payload Team,* New York, NY September 2025 – Present

- Ran parameterized RocketPy simulations to generate synthetic sensor data for high-altitude payload experiments
- Developed Python scripts to augment simulated sensor data by introducing controlled noise, improving robustness for downstream LLM-based prediction and anomaly detection