Samuel Adams

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Education

The Pennsylvania State University State College, PA

Bachelor of Science in Computer Science, Minor in Engineering Leadership Development *August 2022 – May 2026*

- Relevant Coursework: Data Structures and Algorithms, Discrete Mathematics, Leadership Principles, Systems Programming

Experience

AI Engineer June 2026 – Present

West Shore Home *Mechanicsburg, PA*

- Built and launched an after-hours AI voice agent that handles existing-customer calls (rescheduling, canceling, appointment lookup), autonomously resolving 100% of after-hours calls in production and generating $300K in gross sales in its first month
- Designed a caller-identification workflow that preloads account data at call start and verifies alternate phone numbers via house number, street name, and ZIP matching backed by Azure address geocoding, eliminating misidentified callers
- Architected a production call-analysis platform on Azure Functions, pairing AssemblyAI transcription with a two-stage Azure OpenAI pipeline that scores 3,000+ calls per day, powering rep QA and coaching at scale and feeding the performance dashboards leadership acts on
- Built an LLM evaluation harness with deterministic scoring, Wilson confidence intervals, prompt-drift detection, and a blind labeling UI, gating every prompt change on beating a field-level accuracy baseline with no regressions before it ships
- Rebuilt the real-time scheduling-at-point-of-sale engine that surfaces live appointment availability to sales, replacing a legacy system reps couldn't trust; validated it as the more accurate implementation through a side-by-side harness that auto-flagged mismatched outputs, driving more booked jobs on cleaner availability

Applied AI Intern May 2025 – May 2026

West Shore Home *Mechanicsburg, PA*

- Automated the inside sales quality assurance and performance review process, enabling QA managers to review 8x more calls per day
- Created scalable AI-driven workflows with n8n and AssemblyAI to assess call quality and collect customer data in real time, increasing customer data accuracy

DementiAnalytics Undergraduate Researcher January 2025 – May 2025

The Pennsylvania State University *State College, PA*

- Developed a full-stack mobile app (React, Django) for early dementia detection, collaborating with clinical researchers to translate dementia biomarkers into algorithmic detection methods

Projects

Architect | *TypeScript, Electron, React, Claude Code, Multi-Agent Orchestration* April 2026

- Built a desktop app that lets engineers design system architecture on a drag-and-drop canvas, then spawns parallel AI agents to implement each zone concurrently
- Designed a coordinator/worker orchestration layer with JSON mailbox messaging, typed completion results, and mid-task Q&A threading between agents

Echo | *Python, Streamlit* March 2025

- Won "Best Use of Gemini API" at HackPSU with a multi-agent system where one agent decomposes complex problems, delegates subproblems to a solver agent, and verifies responses, mixing ChatGPT and Gemini for reasoning diversity

Technical Skills

Languages: Python, TypeScript, JavaScript, SQL, Java, C, HTML, CSS
Frameworks: React, Next.js, Node.js, FastAPI, Flask, Electron, Streamlit
AI/LLM: Azure OpenAI, Anthropic API, Langfuse, LLM evaluation, multi-agent orchestration, AssemblyAI
Developer Tools: Git, GitHub Actions, Azure, Databricks, PostgreSQL, n8n, Salesforce, Google Cloud Platform