

Jacob Roedel

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EXPERIENCE

DELL TECHNOLOGIES

Austin, Texas

Software Engineer II – AI Innovation

July 2024 – Present

- Built a *No Code Agent Builder* for Dell Agentic Core enabling dozens of internal users to create, edit, and deploy multi-agent systems and tools locally on Dell PCs, with a React frontend and Node.js API capturing agent definitions (tools, models, providers, execution code) and exporting JSON agent configs and C# tool files
- Implemented an automatically registered and discoverable CLI chat interface for newly deployed agents, integrated with a Kafka-driven dynamic agent registration pipeline accessed via REST API
- Developed a Python-based OpenAI agentic system with a chat interface that collects user requirements (use case, deployment constraints, hardware, latency) and queries a Hugging Face MCP server to recommend optimal models for deployment on Dell servers and AI PCs, including rationale for each selection
- Designed structured output pipelines using Pydantic to validate and parse LLM-generated recommendations

Software Engineering Intern – Consumer Product Group

May 2023 – August 2023

- Developed a Q&A Retrieval Augmented Generation (RAG) chatbot for an internal sales/support team using GPT-3.5 Turbo, OpenAI text embeddings, Pinecone as a vector database, and similarity searches to decrease manual time spent searching for answers in documentation and increase reliability of information
- Utilized frameworks including LangChain for document ingestion and text generation, Pinecone for vector/embedding and metadata storage, and Streamlit for a frontend web application interface

GEORGE WASHINGTON UNIVERSITY

Washington, D.C.

Undergraduate Teaching Assistant

January 2023 – January 2024

- Co-taught laboratory sections of 20 students for CSCI 1012 and CSCI 1111 (Introduction to Programming with Python and Introduction to Software Development)
- Aided students by teaching lecture material and algorithmic thinking during semiweekly office hours

Undergraduate Research Assistant

June 2022 – August 2022

- Designed multiple scheduling algorithms to process image analysis requests from ten different clients on an edge server dependent on the deadline for completion and execution time of the request

PROJECTS

Beacon — React, TypeScript, Node.js, AWS, Anthropic SDK, PostgreSQL

July 2026 – Present

- Architected and built a full-stack financial platform (net worth tracking, debt-payoff optimization, Plaid-integrated budgeting, Monte Carlo retirement projection) with a hand-rolled Claude tool-calling agent, exposing live financial computations as agent tools with numeric claims traceable to tested functions
- Built a scheduled autonomous agent that monitors financial state nightly, persists findings across runs, and decides what's worth surfacing to the user rather than alerting on every threshold crossed
- Designed an event-driven async architecture (SQS-triggered Python/NumPy Lambda) for long-running Monte Carlo simulations and a persistent Express server with SSE streaming for reconnect-safe interactive agent chat

EDUCATION

GEORGE WASHINGTON UNIVERSITY

Washington, D.C.

Bachelor of Science in Computer Science; Minor in Economics

May 2024

University Honors Program; Presidential Academic Scholarship; Robert Reddy Memorial Scholarship

SKILLS

Languages: Python, TypeScript, JavaScript, Java, HTML, CSS, C

Frameworks: React, Node.js, Next.js, Express, FastAPI, Flask, n8n, Pydantic

AI: OpenAI Agent SDK, Anthropic SDK, LangChain, MCP, RAG

Databases: PostgreSQL, Pinecone, MySQL, SQLite

Developer Tools: Git, Claude Code, Codex, Devin, VSCode, Docker, WSL, Kafka

Cloud Deployment: AWS (EC2, Lambdas, SQS, EventBridge, Cognito, CDK, S3, CloudFront), Vercel, Neon, Supabase