

ANDREW CATOIU

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EDUCATION

University of San Francisco

Bachelor of Science in Computer Science

GPA: 3.7

Teaching Assistant: SQL & Relational Databases, Systems and Organizations

Relevant Coursework: Data Struct & Algorithms, Operating Systems, Computer Networks, Software Development, Artificial Intelligence

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C, SQL, C#, HTML/CSS

Tools & Technologies: Database Management Systems, Git, Windows/Linux, VirtualBox, Wireshark, Heroku, Github Actions, Office 365

Certifications: AWS Certified Cloud Practitioner

WORK EXPERIENCE

Software Engineer Intern - JPMorgan Chase & Co. | Chicago, IL

Jun 2025 – Aug 2025

- Architected an MCP server integrating AI with version control, task management, relational databases, and object storage
- Built AI agent tools with Python (FastMCP, Flask server) and LLMs to support natural language queries across multiple services
- Created REST API with Kerberos authentication for secure, read-only database access, preventing unauthorized modifications
- Gained hands-on experience with SDLC and Agile/Scrum, presenting architecture, use cases, and demos to senior leadership
- Validated system across 24 real-world use cases with 96% task success, including team progress reporting, automated code insights, and natural language database queries

Software Engineer Intern - Striim | Palo Alto, CA

Feb 2025 – May 2025

- Developed a FastAPI backend translating natural language queries into SQL using OpenAI and Anthropic API
- Implemented an iterative LLM-as-a-Judge workflow to validate and improve SQL queries before delivering results to the user
- Achieved 86% query accuracy against standardized dataset within Spider 2.0, focusing on error analysis and reproducibility
- Connected the backend to a user interface intended for non-technical employees to access data without writing complex SQL queries

Teaching Assistant | San Francisco, CA

Jan 2024 – May 2025

- Assisted in teaching topics including business process improvement, workforce management, and data modeling
- Supported students in writing database queries and troubleshooting MySQL Workbench, Oracle, pgAdmin, BigQuery, Snowflake
- Graded over 150 project deliverables, covering AON network diagrams, Gantt charts, Chen's notation, and SQL exercises
- Conducted weekly labs to guide students through material and project work, answering questions and providing hands-on support

PROJECTS

Search Engine | Java, Jetty, SQL

Dec 2024

- Developed a web crawler using Java, focused on concurrency, networking, and database integration
- Implemented multithreaded search algorithms, web interface with servlets, and SQL database for indexing
- Managed pull requests with Git to schedule regular code reviews that ensured optimized and maintainable code

Portfolio | Node.js, PostgreSQL, Heroku

Sep 2024

- Constructed a destination for clients to view projects and services with full site customization for admin
- Built content management system that updates bio, photos, work experience, education, projects, and contact information
- Handled user/admin privileges through Node-Express sessions, site content retrieved by SQL queries and rendered via EJS

End-to-End Network Compression Detector | C, VirtualBox, Wireshark

May 2024

- Designed and implemented client-server and standalone network applications to detect network compression using UDP packet trains, TCP connections, and raw socket programming
- Wrote detection algorithms to identify timing differences between low and high entropy packet trains taking in parameters such as payload size, inter-measurement time, and TTL

Course Scheduler | Python, Flask, Selenium, JavaScript

Apr 2023

- Built a schedule generator for USFCA curriculum based on a list of courses provided by the student
- Designed algorithms in Python to track, sort, and rank schedules based on user preferences
- Produced a script to web scrape RateMyProfessor data used in ranking course schedules

E-Commerce Template | Next.js, Sanity, Stripe API

Aug 2022

- Created online storefront with a functioning shopping cart and integrated Stipe API to handle transactions/email confirmations
- Rendered product information from content management system