Andrew Presman

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Experience

Walmart Global Tech, *Software Engineer II*, Bentonville, AR — July 2025 – Present

- Leading the migration of 14+ Walmart and Sam's Club clients to direct CTH integration, owning the decommissioning of two intermediary services and building AI agents that detect 85+ production-to-staging mismatches per client, generate and test fixes, and update pull requests based on engineer feedback.
- Redesigned BigQuery data model for 35M+ daily purchase contracts by flattening nested JSON schemas into partitioned, pre-aggregated tables via scheduled ETL, eliminating full-table scans and reducing query latency.
- Designed an asynchronous transaction recovery pipeline using Spring Boot and Redis queues to reprocess 60K+ failed CosmosDB transactions daily, protecting $3M+ in purchase volume.
- Created a troubleshooting agent that analyzes payment failures, republishes recoverable errors through GCP, and records remediation actions in JIRA, cutting manual triage work by 200+ minutes per day.

Vaive Logistics, *Software Engineer Intern*, Barcelona, Spain — Sept 2024 – Dec 2024

- Re-architected the robot telemetry ingestion pipeline using queue-buffered batch writes to AWS RDS, eliminating 1.3M+ redundant database writes/month while improving ingestion throughput.
- Created internal visualization tooling using Python, NumPy, and Matplotlib to render 3D sensor trajectories across 9K+ motion paths, enabling engineers to detect path-planning anomalies without manual CSV analysis.

Walmart Global Tech, *Software Engineer Intern*, Bentonville, AR — June 2024 – Aug 2024

- Accelerated checkout migration validation by building a scheduled Spring Boot service that processed 300K+ daily CosmosDB payment records, detected payment failures, and generated automated recovery reports.
- Developed Splunk/OpenObserve dashboards tracking checkout failure rates, introducing indexing to improve query performance, which revealed a faulty payment tender that prevented $800K in incident impacts.

University at Buffalo ESC Group, *Undergraduate Researcher*, Buffalo, NY — Aug 2023 – May 2024

- Developed ML pipelines evaluating CNN, RNN, and SVM models for stutter detection on 18K audio samples.
- Designed an end-to-end Python pipeline for data processing, feature extraction, and evaluation, reducing processing time from 1 minute to 30 seconds per audio file and efficiently handling 200+ audio files.

Projects

TextAgent | *Python, LangGraph, OpenAI, FastAPI, Twilio, Redis*

- Built an SMS-based AI agent that lets users text questions and get real-time answers, integrating tools in LangGraph to decide when to browse the web, retrieve context, or send messages back through SMS.
- Implemented delayed messaging by enqueueing scheduled jobs in Redis and executing them through background workers that triggered SMS webhooks at runtime.

Event-Driven Notification System | *Java, Spring Boot, RabbitMQ, Docker, Discord API*

- Built a Spring Boot stock alert service integrating Yahoo Finance APIs and Discord for real-time price queries.
- Implemented a RabbitMQ event pipeline polling prices every minute and delivering 100+ automated alerts/day.

Education

University at Buffalo, State University of New York — May 2025

Bachelor of Science in Computer Science, Minor in Mathematics — *GPA: 3.96/4.0*

Skills

Languages: Java, Python, Go, C, C++, SQL, TypeScript, JavaScript, HTML, CSS
Frameworks: Spring Boot, FastAPI, Flask, Node.js, Express.js, React.js
Tools: GCP, AWS, PostgreSQL, MongoDB, BigQuery, Redis, Looker, Docker, Jira, Git
Concepts: Backend, Distributed Systems, System Design, Software Engineering, REST APIs