Justin Roberts

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Education

Cornell University Ithaca, NY

Bachelor of Arts in Mathematics and Computer Science *Expected: May 2028*

Relevant Coursework: Large Scale ML, RL, ML, Algorithms, Data Structures & Algorithms, Computer Systems

Experience

Software Engineer Intern June 2026 – Aug 2026

Wayfair *Boston, MA*

- Developed a Gemini-based review moderation system evaluating ∼1K reviews/day via a Big Query to Vertex AI path with Airflow DAGs, achieving 89% precision at 98% recall against human moderator decisions
- Built an end-to-end image upload and retrieval pipeline in Java/Spring Boot with GraphQL, GCS signed URLs, and DAM, supporting 10K+ uploads/day while maintaining sub-500 ms p95 latency
- Optimized PostgreSQL ingestion procedures processing 5M+ third-party reviews annually, cutting redundant UPDATE operations by 80% and downstream Airflow events by 60% across the pipeline
- Led a Devin AI knowledge-transfer session for 15+ engineers on agentic debugging workflows and best practices, cutting team PR rollback rate by 30% within weeks of adoption

Software Engineer Intern Sept 2025 – May 2026

PlayToon *Remote*

- Redesigned and optimized Prisma ORM database schema in JavaScript that reduced data redundancy by 30%
- Built an AWS S3 upload pipeline across dev/staging/prod, comparing presigned URL and server-mediated flows to reduce failed uploads by 40% and simplify IAM role management by 50%
- Overhauled and expanded developer documentation with setup guides and architecture diagrams, cutting onboarding time by 30% and increasing cross-team code consistency by 20%

Teaching Assistant: Introduction to Machine Learning Aug 2026 – Present

Cornell University *Ithaca, NY*

- Deliver weekly office hours and discussion sections for 300+ students, translating core ML theory (SVMs, gradient descent, neural networks, bias-variance tradeoff, regularization) into applied intuition
- Author and grade problem sets and exams for 10+ students, calibrating rubrics with 5+ course staff

Independent Researcher May 2025 – Oct 2025

Stony Brook University *Stony Brook, NY*

- Developed sublinear graph algorithms using global queries to detect isolated vertices, achieving logarithmic query complexity while reducing query complexity by 75% over prior approaches
- Validated performance in Python on 1,000+ synthetic graphs, achieving 25% faster runtime than legacy code

Projects

Buzzword Decoder | Demo | *JavaScript, Express, Chrome Ext. API, Claude API* July 2026

- Built a Chrome extension (Manifest V3) and a Node/Express proxy on Render integrating Claude Haiku 4.5 to translate corporate jargon in real time, achieving sub-2s end-to-end latency per page
- Engineered a whitespace-normalization algorithm that maps collapsed webpage text back to original DOM offsets, increasing phrase-match accuracy by ∼35% across scanned pages
- Secured the Anthropic API key behind a Render-hosted, token-authenticated proxy with constant-time comparison, eliminating client-side exposure at under 100ms p95 overhead

Trading Bot | *Python, yfinance API, Alpha Vantage API, Git* Aug 2025 – Jan 2026

- Developed a Python trading signal engine implementing SMA, Bollinger Bands, and RSI indicators to generate automated buy/sell recommendations across multiple timeframes
- Built a market data pipeline integrating yfinance, Alpha Vantage, and ccxt APIs across equities and cryptocurrencies, generating a 21.50% gain on BTC, 14.39% on ETH, and 16.29% on BNB in 2025

Technical Skills

Languages: Java, Python, C, JavaScript, SQL, GraphQL, Assembly, Julia, HTML/CSS, PHP
Frameworks: Spring Boot, React, Node.js, Express, FastAPI, Django, PyTorch
Developer Tools: AWS, GCS, Docker, Kubernetes, Git, GitHub, DataDog, Buildkite, Chrome Extension APIs (Manifest V3), Anthropic API
Libraries: pandas, NumPy, Matplotlib, ccxt, yfinance, Alpha Vantage