Pratyush Sudhakar

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EDUCATION

Cornell University   Ithaca, NY
Bachelor's of Science in Computer Science | Overall GPA: 3.65   December 2025
Coursework: Adv. ML, Systems Prog., Algorithms (Java), Functional Prog. (OCaml), OOP (Java), Computer Vision

TECHNICAL SKILLS

Languages: Python, Java, TypeScript/JavaScript, C++, OCaml
Frameworks & Databases: React/Next.js, Express/Node.js, Django/Flask, Prisma, SQL/PostgreSQL, GraphQL
Cloud & DevOps: AWS, GCP, Docker, Kubernetes, GitHub Actions, Linux Shell

EXPERIENCE

Software Engineer (Contract), *Halo — Wearable AI*   June 2025 - July 2025
- Built real-time face recognition iOS app integrating ESP32 streams with Apple Vision Framework for instant social profile aggregation and local face-data management via custom REST APIs.
- Modularized legacy UI, cutting code redundancy 40%, app size 30%, achieving 25% faster streaming performance.
- Redesigned Celery + Redis backend architecture with multi-layered OpenAI prompts, reducing face-search processing time from 3 minutes to under 50 seconds.

Computer Systems Developer, *Rizvi Lab, Cornell University*   July 2024 - September 2024
- Developed PyQt-based touchscreen control interface for BeagleBone systems, enabling real-time monitoring and remote control of food processing equipment through secure SSH connections.
- Automated system operations using Linux shell scripts and cron jobs, reducing manual intervention by 60% and improving equipment uptime monitoring.

Software Engineering Intern, *rapStudy*   June 2023 - August 2023
- Refactored codebase, introduced Redux for state management, and optimized components with memoization.
- Created a secure song-sharing system, using React and 10+ custom Firestore rules for precise access control.
- Developed Redux-powered global audio-playback component, perfectly syncing with lyrics display for enhanced UX.

Data Engineering Intern, *Cornell College of Engineering*   June 2023 - September 2023
- Engineered a scalable ETL pipeline to process financial data from 3,000+ companies, utilizing Selenium (scraping), NLP, and multithreading, reducing processing time by 83%.
- Built a live data dashboard using Next.js and Server-Sent-Events, cutting latency by 66% with parallelization.

ACTIVITIES

Head of Engineering & President, *Perfect Match: Online Matchmaking*   January 2023 - May 2025
- Directed 4 cross-functional teams through product launch, overseeing recruitment, onboarding, and business planning.
- Enhanced UI/UX and set up automated personalized emails (cron jobs), resulting in 600+ new active users.
- Built analytics platform delivering real-time survey insights to 5,000+ users via cached Map-Reduce aggregations, reducing latency by 93%.

Technical Product Manager, *Cornell Digital Tech & Innovation*   January 2023 - December 2023
- Spearheaded agile development of cross-platform ride scheduling app with a team of 7 developers.
- Architected test-driven development pipeline using Cypress, Mocha, and Supertest, attaining 94% code coverage.
- Orchestrated CI/CD workflow with GitHub Actions and Kubernetes for streamlined deployment and testing.

VENTURES & PERSONAL PROJECTS

AI Assistant (Millennium Sponsored) | *Zilliz, Flask, NLP, Azure*   March 2024 - May 2024
Devised a course syllabus assistant with Azure-hosted REST API, utilizing Langchain Models and Zilliz Cluster for vector similarity search, achieving 50ms average response time for context-aware student queries.

Content Sharing Platform | *Next.js 14, Apollo, GraphQL, MongoDB*   April 2024 - May 2024
Crafted a Netflix-themed full-stack web application, empowering users to craft and broadcast blogs and live video streams.

Harmonious Sounds | *Scikit-Learn, React, Flask, Express, Docker, Nginx*   February 2023 - April 2023
Engineered a web application utilizing a Logistic Regression model to predict Spotify playlist happiness levels with 88% accuracy. Optimized performance using Nginx for efficient load balancing and proxying across 4 microservices.