

# Pratyush Sudhakar

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## EDUCATION

### Cornell University

Bachelor's of Science in Computer Science

Ithaca, NY

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, Terraform, Grafana

## EXPERIENCE

### 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

### Halo - Wearable AI | Swift, OpenAI, ESP32, Vision Framework, Celery/Redis

June 2025 - July 2025

Built a real-time face-recognition app (iOS+ESP32) with Apple Vision + OpenAI; refactored code (-40%), trimmed app size (-30%), raised streaming performance (+25%), and cut backend latency from 3 min to 50 s via a Celery/Redis redesign.

### Depression Prediction ML System | Python, Scikit-Learn, Pandas, NumPy

May 2024

Engineered ML pipeline achieving 93% accuracy in distinguishing bipolar from unipolar depression using sleep activity and circadian rhythm data. Implemented feature engineering for temporal patterns and cross-validated ensemble models.

### 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.

### Harmonious Sounds | React, Flask, Docker, Nginx, Scikit-Learn

March 2023 - April 2023

Engineered web app with Logistic Regression model predicting Spotify playlist happiness (88% accuracy). Optimized performance using Nginx load balancing across 4 microservices.