

# Pratyush Sudhakar

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## EDUCATION

### Cornell University

Ithaca, NY

Bachelor's of Science in Computer Science | Overall GPA: 3.865 | Major GPA: 3.97

May 2025

**Relevant Courses:** Advanced Machine Learning Systems, Systems Programming (C++), Analysis of Algorithms, Functional Programming (OCaml), Object-Oriented Programming (Java), Intro to Machine Learning, Computer Vision

**Activities:** Cornell Wushu (Vice-President), Object-Oriented Programming (TA), Association of CS Undergrads (Member)

## EXPERIENCE

### Head of Engineering & President

Jan 2023 - May 2024

*Cornell Perfect Match: Dating Service for Cornellians*

*Ithaca, New York*

- Led 4 cross-functional teams, overseeing recruitment, onboarding, and management, to ensure a successful launch.
- Revamped the website's frontend for enhanced UI/UX and implemented automated personalized engagement emails (cron jobs), resulting in a significant boost in user engagement and a 600+ increase in active users.
- Initiated offline-to-online matching algorithm transition, deployed via a Flask microservice, resulting in 50,000+ real-time matches and enhanced system responsiveness.
- Engineered a Flask microservice to deliver a real-time user analytics dashboard, leveraging MongoDB Map-Reduce for optimized data aggregation and server response caching for reduced latency, resulting in a seamless UX for 5,000+ users.

### Software Engineering Intern

Jun 2023 - Aug 2023

*rapStudy*

*Los Angeles, California*

- Spearheaded codebase refactoring, introducing Redux for state management and memoization for component optimization. Achieved a 160% improvement in the website's speed index, significantly enhancing user experience.
- Architected and implemented a secure song-sharing system, using React and 10+ custom Firestore rules for precise access control, allowing authorized users to share platform's content externally.
- Engineered an audio playback module using Redux, ensuring globally accessible, synchronized lyrics display with a minimal 500ms delay.

### Technical Product Manager

Jan 2023 - Dec 2023

*Cornell Digital Tech & Innovation*

*Ithaca, New York*

- Onboarded and directed a team of 7 developers to build a cross-platform campus-wide ride scheduling application.
- Led the implementation of a comprehensive test automation framework (Cypress/Mocha/Chai/Supertest) for both frontend and backend, achieving 94% test coverage and ensuring high software quality.
- Containerized the application platform with Docker, and orchestrated automated deployment and testing through a Kubernetes cluster and GitHub Actions.

### Data Engineer

Jun 2023 - Sep 2023

*Cornell College of Engineering*

*Ithaca, New York*

- Engineered a scalable ETL pipeline using Selenium for web scraping, NLP for data extraction, and multithreading for parallel processing, resulting in an 83% reduction in processing time for financial data from 3,000+ companies.
- Developed a data preview application with Next.js and Flask, using Server-Sent-Events for real-time updates and parallel processing to reduce data latency by 66%.

## PERSONAL PROJECTS

### CleverHug Email Scheduler | React, Flask, QStash, Tailwind

Apr 2024

Full-stack web application empowering users to schedule personalized, uplifting emails to their future selves, leveraging LangChain models for optimized scheduling rules (RRULE) and QStash for robust queue management and reliable delivery.

### AI Syllabus Summarizer & Q&A Tool | Supabase, Zilliz, Next.js, Flask, LangChain

Feb 2024 - Mar 2024

Web app enabling students to query syllabus content using natural language. Used Supabase for data storage and a Zilliz cluster for fast vector search of cached responses, ensuring low latency and optimized performance.

### Live Blog and Video Sharing Platform | Next.js 14, Apollo, GraphQL, MongoDB, Mux

Apr 2024

Full-stack web app with a Netflix-style interface, enabling users to create and share engaging blog posts and live video content.

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

Apr 2023

Microservices-based web application incorporating a Logistic Regression model to predict users' Spotify playlists' happiness levels with 88% accuracy. Leveraged Nginx for seamless load balancing and proxying between four microservices.

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, JavaScript/TypeScript, C++, OCaml

**Frontend Frameworks (Web & Mobile):** React.js, Redux.js, Next.js, Angular, Svelte, React Native, Flutter

**Backend Frameworks:** Node.js, Express.js, Flask, Django, Nest.js, FastAPI, Prisma (ORM)

**Databases & Query Languages:** SQL, GraphQL, MySQL, PostgreSQL, MongoDB, DynamoDB, Firebase

**Cloud & DevOps:** Amazon Web Services, Google Cloud Platform, Microsoft Azure, GitHub Actions, Docker, Kubernetes, Nginx