Pratyush Sudhakar

607-279-4794 | ps2245@cornell.edu | LinkedIn | GitHub | pratyushsudhakar.com | New York, United States

EDUCATION

Cornell University   Ithaca, NY
Bachelor's of Science in Computer Science | Overall GPA: 3.865 | Major GPA: 3.97   May 2025

Relevant Coursework: 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   January 2023 - Present
Cornell Perfect Match: Dating Service for Cornellians   *Ithaca, New York*
- **Leadership**: Led and mentored 4 product teams, overseeing recruitment, onboarding, and technical skill development to ensure successful and timely delivery of the dating platform.
- **Frontend**: Redesigned the website's frontend for improved UI/UX, enhancing user engagement and system scalability.
- **Analytics**: Engineered a Flask microservice with optimized MongoDB Map-Reduce aggregation for a real-time analytics dashboard serving 5,000+ users. Integrated server response caching to enhance performance and reduce latency.
- **Matching Algorithm**: Initiated the transition from offline to online matching algorithms, deploying a Flask microservice to enable real-time matching, resulting in 50,000+ matches and enhanced system responsiveness.
- **User Engagement**: Automated personalized user engagement emails via cron jobs, yielding a 600+ increase in active users.

Software Engineering Intern   June 2023 - August 2023
rapStudy   *Los Angeles, California*
- **Frontend Optimization**: Spearheaded codebase refactoring to Redux and memoization, boosting rendering speed by 93%.
- **Feature Development**: Architected a song-sharing feature using React, Firebase, and 10+ custom Firestore rules, enabling authorized users to grant controlled access of premium content to external users.
- **Feature Development**: Engineered a standalone SongView and playback component with Redux, ensuring global app access and minimizing synchronization delay between song playback and lyrics update to 500ms, improving user experience.

Technical Product Manager   January 2023 - December 2023
Cornell Digital Tech & Innovation   *Ithaca, New York*
- **Project Leadership**: Led a team of 7 developers in building a cross-platform campus-wide ride scheduling application. Utilized Agile methodologies and introduced Test-Driven Development (TDD), achieving 94% test coverage.
- **DevOps Implementation**: Dockerized the platform and established CI/CD pipelines with GitHub Actions and Kubernetes, reducing deployment and testing time by 90%.

Data Engineer   June 2023 - September 2023
Cornell College of Engineering   *Ithaca, New York*
- **ETL Pipeline Development**: Engineered an ETL pipeline using Selenium and NLP to process financial data of 3000+ companies, achieving an 83% processing time reduction through multithreading.
- **Full-Stack Development**: Developed a full-stack app with Next.js and Flask, featuring Server-Sent-Events for real-time data display and experiencing a 66% data latency reduction.

PERSONAL PROJECTS

CleverHug Email Scheduler | *React, Flask, QStash, Tailwind*   *April 2024*
Full-stack web app for scheduling uplifting emails to users' future selves. Utilized LangChain models for optimized schedule rules (RRULE) and integrated QStash for reliable queue management and email delivery.

DTI GPT | *Supabase, Zillus, Next.js, Flask, LangChain*   *March 2024*
Full-stack AI tool to summarize syllabi and enable student interaction through natural language queries. Optimized response times with Supabase, Zillus, and Vector Search.

Live Blog and Video Sharing Platform | *Next.js 14, Apollo, GraphQL, MongoDB, Mux*   *April 2024*
Full-stack platform for creating, sharing blog posts, and streaming live video content using Mux for seamless delivery.

Harmonious Sounds | *Scikit Learn, React, Flask, Express, Docker, Nginx*   *April 2023*
Microservices-based web app incorporating a Logistic Regression model for playlist happiness prediction with 88% accuracy. Employed Nginx for seamless proxying between 4 microservices.

TECHNICAL SKILLS

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

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

Backend Frameworks & Databases: Node.js, Express.js, Flask, Django, Nest.js, FastAPI , MySQL, MongoDB, Redis, DynamoDB, Apollo GraphQL (Query Language), Prisma (ORM)

Cloud & DevOps: AWS (ECS, ECR, CloudWatch, S3, Lambda, DynamoDB), GCP (Cloud Functions, Artifact Registry, Firebase), Azure (Functions, Container Registry), Docker, Kubernetes, Shell Scripting, Nginx, Gunicorn