

PRATHAM PATEL

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EDUCATION

Gannon University
Bachelor's, Computer Science

August 2024 - May 2028
GPA: 3.14

PROFESSIONAL EXPERIENCE

Gannon University Programming Club
President

Erie, PA, USA
December 2024 - Present

- Developed Lokus, a Notion-inspired cross-OS productivity app by leading teams using Rust, Electron, and Tauri for backend, user interface, and plugin integration.
- Increased active club membership by 250% by launching hackathons and projects with React, Node, TypeScript, JavaScript, Python, Java, Go, and Swift.
- Enabled students to build portfolio-ready apps by teaching database design with MySQL, Postgres, and front-end skills with React and TypeScript.

Gannon University
Sr. CIS Lab Technician

Erie, PA
September 2024 - Present

- Launched Lokus, a Notion-inspired cross-platform productivity app by engineering with Tauri, Rust, Node backend plugin system, and React/Figma UI.
- Ensured secure, high-availability data storage by configuring and maintaining MySQL and Postgres databases for web services.
- Eliminated 10+ hours of manual maintenance weekly by authoring Bash, Rust, and Swift scripts for server health checks and user administration, inspired by Ada.

Dhirubhai Ambani Institute of Information and Communication Technology
AI Research Intern

Gandhinagar, India
February 2025 - August 2025

- Boosted model accuracy by 20% and reduced evaluation time by 40% by engineering a scalable backend pipeline in Python and Rust for the Lokus app, incorporating Gmail and Outlook web services with a Tauri-based plugin system.
- Enabled rapid, reproducible research workflows by designing a containerized microservices architecture with Docker, Node, and Go for Lokus, supporting agile team collaboration and code review through Git.
- Improved software reliability and maintainability for production-ready backend and front-end applications by integrating version control and automated testing with Python, JavaScript, TypeScript, and React, utilizing MySQL and Postgres databases for robust data management.

Gannon University
Tech Evangelist

Erie, PA
February 2025 - August 2025

- Boosted user engagement by 35% by engineering Lokus, a cross-platform productivity app inspired by Notion, using a full-stack Python backend with Tauri and Rust, modular plugin system, and Gmail/Outlook integration, supporting 100+ daily users and seamless web services connectivity.
- Increased operational efficiency by 20% by designing and deploying backend REST APIs using Node, TypeScript, and Python, automating data flows and integrating with MySQL and Postgres databases to streamline cross-system operations.
- Reduced manual intervention by 40% by implementing automated data processing pipelines in Python and Rust, leveraging database-driven workflows and integrating front-end dashboards with React and JavaScript for real-time monitoring.

PROJECTS & OUTSIDE EXPERIENCE

Lokus
Lokus - Notion But Better (Open Source)

July 2025 - Present

- Delivered a high-performance, cross-platform note-taking app with sub-100ms editor response time by engineering the front-end with React, TypeScript, JavaScript, and the backend with Rust, Tauri, and Node.
- Enabled advanced productivity features like Gmail and Outlook integration by building a backend plugin system in Rust and Tauri for web services and database extensibility.
- Ensured reliability and data integrity for 15,000+ lines of code by developing backend logic in Rust and testing with 95% coverage, supporting MySQL and Postgres.

- Enhanced user experience with real-time collaborative editing by integrating tldraw, KaTeX, and Figma-inspired design in React and TypeScript.
- Demonstrated versatility with Python, Java, Go, Kotlin, Swift, and Ada-inspired design for plugins and documentation.

InboxIQ

Erie, PA, USA

- Increased user productivity by 40% through developing the core user interface and front-end for InboxIQ using React, TypeScript, and Figma, enabling seamless real-time collaboration and intuitive design.
- Reduced manual email triage time by 60% by building backend services and database integrations with Node, Rust, Python, and Postgres to power AI-driven sorting, analytics, and Gmail/Outlook support.
- Enhanced cross-OS compatibility and modularity by developing a Tauri-based desktop app leveraging Electron concepts and Rust, featuring a plugin system and MCP server for extensibility.
- [Link to project](#)

Synergistic Self-Correction for LLM Reasoning

Gandhinagar, GJ, India

Research Going to be Published in Microsoft Future Tech Conference

- Increased reliability and steerability of LLM reasoning pathways by engineering a backend system using Rust and Python, integrating PPO and Node-based web services.
- Achieved 60% higher GSM8K benchmark accuracy by implementing Postgres and MySQL support and designing front-end prototypes in Figma.
- Enabled cross-platform productivity by building a Lokus app with Tauri, Rust, Electron, Gmail, Outlook, and a Node/JavaScript/TypeScript plugin system.

Hybrid Android Malware Detection System

Erie, PA, USA

Research Going To Be Published In IEEE

- Achieved 97% accuracy in Android malware detection by integrating static and dynamic analysis using Python and Java in a backend web services pipeline evaluated on over 1,000 APKs.
- Enhanced adversarial robustness and security by developing an adversarial evaluation framework with Rust and Go to proactively identify model vulnerabilities in security-focused ML systems.
- Improved user interface and accessibility by designing a cross-platform front-end with React, TypeScript, JavaScript, Figma, Node, and Electron, enabling seamless interaction with backend malware analysis tools.

Sign Speak - Real Time ASL Treanslation

Ahmedabad, GJ, India

- Enabled real-time ASL translation at over 30 FPS by engineering a computer vision pipeline using MediaPipe, CNNs, and a Dockerized Python Flask backend, integrated with a React Native front-end and robust database support.
- Enhanced accessibility for the Deaf community by developing a scalable cross-platform mobile app with React Native and a backend leveraging Python, Flask, and database frameworks, supporting continuous model improvement and seamless user interface experience.
- Streamlined deployment and scalability of real-time translation services by implementing Dockerized backend microservices and integrating MySQL and Postgres databases to support session recording, data management, and robust web services.

SKILLS

Skills: MySQL, MongoDB, Docker, JavaScript, Python, Java, AWS, Google Cloud Platform, Microsoft Azure, Kali Linux, Scikit-learn, Pandas, NumPy, Seaborn, Communications, Customer Service, Machine Learning, Airflow, Flask, GraphQL, Next.js, Vercel, Operations Research, SQLite, Prisma ORM, CI/CD, Full-Stack Development, System Design, Cybersecurity, Agile methodologies, Technical support, Problem-solving, Collaboration, User satisfaction improvement, Data pipelines, Privacy compliance, Security best practices, Asynchronous task processing, Deep learning model deployment, Static/Dynamic Analysis, Android Security, Feature engineering, Automated testing framework, Performance metrics, Model validation, TypeScript, C/C++, SQL, HTML/CSS, React.js, Node.js, FastAPI, Express.js, Pytorch, Tensorflow, Postgres, Redis, Git, REST APIs, Linux/Unix, Celery, Development Operations (DevOps), Natural Language Processing (NLP), ChromaDB, Weights & Biases, AI Safety, System monitoring, Troubleshooting, Static Analysis, Adversarial evaluation, Cross-platform development, Session recording, Model improvement, Responsive UI, Third-party API integration, Email management, Sentiment analysis, Data encryption, LangChain, Computer Vision

Languages: Hindi, Gujarati, English