

# 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

**Erie, PA, USA**

*President*

*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

**Erie, PA**

*Sr. CIS Lab Technician*

*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

**Gandhinagar, India**

*AI Research Intern*

*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

**Erie, PA**

*Tech Evangelist*

*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

*July 2025 - Present*

*Lokus - Notion But Better (Open Source)*

- 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 Translation

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

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**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