

Vinit Mevani

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EDUCATION

Rutgers University

Master of Science, Computer Science

Jan 2025 - Dec 2026

- GPA: 3.75 / 4.0

Bhagwan Mahavir University

Bachelor of Science, Information Technology

2020 - 2023

TECHNICAL SKILLS

- Languages:** Python, JavaScript, Dart, Java, C, C++, PHP, TypeScript
- Frontend:** React.js, Next.js, HTML, CSS
- Mobile:** Flutter (Android, iOS)
- Backend:** Node.js, Express.js, Flask, REST APIs
- Databases:** MySQL, PostgreSQL, Firebase
- Cloud / Tools:** AWS (EC2, S3, RDS), Git, GitHub, Postman, Linux, VS Code, Code Review Workflows
- Data Processing:** Pandas, PyArrow, NumPy, Large-scale Data Processing
- Concepts:** API Design, State Management, Performance Optimization, Automation, Agile, Web Frameworks, Computer Vision

EXPERIENCE

Rutgers School of Social Work

Jun 2025 - Present

Web Application Developer

- Developed and maintained cloud-based LMS modules using PHP, JavaScript, TypeScript, and MySQL for 2,000+ users, improved system reliability, enhanced user engagement, and supported a seamless learning experience across the platform.
- Integrated Moodle REST APIs and automated backend workflows, improving data accuracy by 30%.
- Optimized SQL queries and application logic, reducing page load times by 20%.
- Fixed cross-browser UI issues, reducing production UI defects by 40%.

Rutgers University (CS Dept.)

May 2025 - Aug 2025

Software Engineering Intern

- Built RESTful backend services using Python Flask, PostgreSQL, AWS on Linux, and implemented large-scale data processing pipelines, enabling faster data access for the department's research platform used by dozens of students.
- Designed a data pipeline using pandas, NumPy, and PyArrow to convert Mermaid DAGs and YAML specs into auto-generated Jupyter notebooks used by 200+ students.
- Refactored backend modules, reducing API error rates by 18%.

OceanmTech

Jan 2024 - Aug 2024

Flutter Developer

- Built and deployed 15+ reusable Flutter UI components using Dart and Flutter's widget library, which accelerated UI development and enabled faster feature releases
- Implemented automated testing workflows with Flutter's integration testing, reducing manual QA effort by 35%.
- Improved rendering and state management, increasing user session duration by 20%.

Fibtion

Mar 2023 - Dec 2023

Flutter Developer Intern

- Developed responsive Flutter screens in VS Code and optimized widget rebuild cycles, resulting in smoother navigation and faster load times
- Refactored codebase using SOLID principles, improving maintainability.
- Reduced post-release bugs by 25% through structured testing and linting with Dart analyzer.

PROJECTS

AWS IAM Privilege Escalation Detection Engine

Apr 2026

- Built a scalable privilege escalation detection engine modeling AWS IAM as a formal state transition system, applying dominance-pruned BFS reachability to uncover multi-hop escalation paths across AssumeRole, PassRole, and service pivots up to FULL_ADMIN.
- Constructed explicit directed attack graphs with centrality metrics to identify bottleneck roles, MITRE ATT&CK pattern classification, and priority-ranked remediation strategies exported as PDF and JSON risk reports.
- Built a Flask web dashboard for uploading IAM JSON exports and interactively visualizing attack graph escalation paths using NetworkX and Matplotlib.

Student Housing Platform

Sep 2025

- Full-stack web platform for housing and roommate matching built with React.js, Next.js, TypeScript, Node.js, Express.js, MySQL, and Firebase. Implemented authentication, verified listings, filters, dashboards, and real-time updates; set up GitHub-based CI/CD pipelines and pull request code review workflows.

Voice Assistant

Jul 2025

- Built a fully offline-capable, voice-controlled desktop assistant in Python, managed in Git with pull request-based code review workflows.
- Implemented custom wake-word detection using Picovoice Porcupine.
- Integrated speech-to-text via Google STT with optional offline VOSK fallback, ensuring low-latency audio processing using PyAudio.
- Used GPT4All for private local LLM-based conversations.
- Automated OS-level tasks including app control, window management, media control, screenshots, and system monitoring using pyautogui, psutil, Win32 APIs, and Windows SAPI TTS.