

Kush Patel

kushpate@andrew.cmu.edu • 732-421-8945 • [linkedin.com/in/patelkush1508](https://www.linkedin.com/in/patelkush1508)

EDUCATION

Carnegie Mellon University

Master of Science in Artificial Intelligence Engineering - Information Security

Pittsburgh, PA

Incoming Sept 2025

- **Coursework:** Systems & Tool Chain in AI Engineering, Machine Learning, Cloud Security, Information Security, and Computer Systems

Rutgers University

B.S. in Computer Science, Minor in Business Administration (GPA : 3.6 / 4.0)

New Brunswick, NJ

June 2022 - May 2024

TECHNICAL SKILLS

Programming Language: Python | C++ | C | Java | TypeScript | SQL (MySQL, Postgres)

AI/ML Tools: PyTorch | TensorFlow | Keras | Hugging Face | OpenCV | NLTK | NumPy | pandas

Platforms & DevOps: Google Cloud (GCP) | Heroku | Linux/Unix | Docker | Kubernetes | Git | CI/CD | SDLC | APIs

PROFESSIONAL EXPERIENCE

Advantest America, Inc

South Plainfield, NJ

TECHNOLOGY SPECIALIST, DEVELOPING

June 2024 - Present

- Developed an ERP-integrated scheduling platform (Python, C++, PowerShell) automating sales/work order tracking, cutting planning time by 90%
- Established and maintained robust ETL distributed pipelines to process and sync 150M+ records via REST APIs to PostgreSQL with real-time updates and error handling
- Integrated legacy systems with robotic arms via TCP/IP; increased PCB measurement speed and accuracy by 22%
- Created computer vision-based inspection tool to validate multilayer PCB sequencing, reducing QA errors and enhancing reliability saving \$100k worth of PCB boards
- Deployed CI/CD pipelines with Jenkins and GitHub Actions, accelerating deployments by 40% and enhancing code reliability through continuous testing

Advantest America, Inc

South Plainfield, NJ

TECHNOLOGY INTERN

August 2022 - May 2024

- Oversaw Azure admin tasks including email systems, Intune deployments, user authentication, and access controls
- Administered VMware, NAS, Windows Server, Layer 2/3 switches, and Active Directory in secure infrastructure
- Designed real-time dashboards analyzing 30K+ operations across departments, streamlining production reporting and throughput monitoring
- Led global asset auditing and backup system managing 1,200+ assets across multiple locations

KEY PROJECTS

MCP Career Companion - Python, Langchain, REST APIs, SQLite, PyTorch

- Created an intelligent assistant track and maintains job search context and saved applications
- Automated status updates and reminders through API integration to improve follow-up efficiency
- Structured personalized experiences by designing contextual user state architecture in Python

Scam Email Detection Model - Python, NPL, Pytorch, TensorFlow

- Developed a binary classification model trained on 100K+ emails to detect scams using TF-IDF and embeddings
- Engineered and fine-tuned Natural Processing Language Model to detect human written or AI written spam
- Achieved 93% accuracy, while reducing false positives through advanced preprocessing

File System (FUSE) - C, Makefile, Benchmark, Report Analysis

- Built a user-space file system in C using FUSE, supporting file and directory operations
- Implemented inode/block management, indirect pointers, and directory removal
- Passed all benchmark tests and improved I/O performance for large files