ROHAN PRAVEEN CHAVAN

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EDUCATION

Virginia Polytechnic Institute and State University

Aug 2024 - May 2026

M.S. in Computer Engineering, GPA: 3.68/4.0

Blacksburg, VA, USA

– Relevant Coursework: Machine Learning, Cloud Computing, AI Systems Design, Advanced NLP, Operating Systems

K.J. Somaiya College of Engineering

Aug 2020 – May 2024

B. Tech in Information Technology, GPA: ~3.8/4.0 (converted)

Mumbai, India

- Relevant Coursework: Data Structures, Algorithms, Operating Systems, Database Systems

EXPERIENCE

Generative AI Intern

May 2025 – Present

AutoUnify (Remote)

- Designed 23+ TypeSpec models for CDK Repair APIs using Cursor's AI-powered code completion, cutting schema duplication by 40% and saving 20 developer hours/week for 5+ teams.
- Built Vertex AI + Gemini pipeline on Azure, auto-generating and validating schemas from unstructured inputs, reducing manual validation time by 25 hours/week across 10+ services.
- Refactored legacy field types with Cursor's BugBot, enforcing naming conventions to improve API type safety, reducing bug reports by 15% for 12 developers.
- Implemented GitOps with GitHub Actions and Pytest, increasing CI/CD merge velocity by 20% and enhancing QA confidence for scalable deployments.
- Skills: TypeSpec, Vertex AI, Gemini, OpenAPI, Azure, Cursor, Git, GitHub Actions, Pytest, REST APIs

Intelligent Process Automation Intern

Jan 2024 – Jun 2024

Colgate-Palmolive GBS

Mumbai, India

- Developed 3 NLP chatbots for O2I and S2P processes, leveraging Windows OS-level intent recognition to automate 70% of 1,000+ weekly FAQ queries, saving 50 staff hours/month for 200+ users.
- Integrated ChatGPT-based REST API with custom intent recognition (Logistic Regression, Decision Trees) using PyTorch, cutting response latency from 15s to 10s.
- Led full-stack React.js chatbot with BERT on Visual Studio Code, deployed via GitHub Actions, improving user satisfaction by 20% per surveys of 150+ employees.
- Designed modular MongoDB backend with Pytest automation, enabling 30% faster model retraining for 5+ enterprise workflows.
- Skills: Python, C++, NLP, ChatGPT API, BERT, React.js, PyTorch, TensorFlow, MongoDB, GitHub Actions, Pytest, Visual Studio Code

Team Member - Amazon Nova AI Challenge

Jan 2025 - Present

Virginia Tech (Team HokieTokie)

Blacksburg, VA

- Led red teaming for Amazon Bedrock models, creating a prompt-attack taxonomy (e.g., code injection, insecure cryptography) identifying 50+ vulnerabilities, enhancing model safety.
- Built ShieldBot with GPT-4 and Claude on Azure, achieving 56ms latency to detect and block 50+ adversarial prompts daily for 10,000+ queries.
- Developed adversarial severity classification with DeepSeek, reducing deployment risks by 30% and informing alignment protocols for 3+ models.
- Collaborated with Amazon researchers to integrate telemetry dashboards via Azure Kusto, improving model monitoring for safety-critical applications.
- Skills: Amazon Bedrock, Azure, Red Teaming, Prompt Engineering, Claude, GPT-4, DeepSeek, AI Safety, Kusto

ACADEMIC PROJECTS

SentiMint - AI Stock Analyzer | LangChain, GPT-3.5, Selenium, Next.js, Flask [GitHub Code]

- Led LangChain-powered multi-agent system with real-time sentiment analysis, achieving 85% stock trend accuracy across 500+ Yahoo Finance datasets at Agent Hacks 2024.
- Built debate-driven recommendation system with bold/cautious personas using Cursor's agent mode, reducing decision latency by 40% vs. manual analysis for 100+ users.
- Designed GPT-3.5 reasoning module with token-wise confidence scoring, improving risk assessment accuracy by 25% for high-stakes trades.
- Skills: LangChain, GPT-3.5, Selenium, Yahoo Finance API, Next.js, Flask, Azure, Cursor, Prompt Engineering

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, SQL

 $\textbf{Frameworks \& Libraries}: \ \text{React.js, PyTorch, TensorFlow, LangChain, Pandas, HuggingFace}$

Tools: Cursor, Visual Studio Code, Git, GitHub Actions, Pytest, Jira

Cloud/DevOps: Azure (Cosmos DB, Kusto), AWS (Lambda, API Gateway), Google Cloud, Docker

Databases: MongoDB, Cosmos DB, MySQL

Integration: REST APIs, OpenAI APIs, Chatbots, CI/CD, AI/ML Models