

# Rajeev Atla

AI/ML Engineer & Data Scientist applying cutting-edge techniques to build secure, scalable, complex systems

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## EDUCATION

Rutgers University - School of Engineering	Sep 2025 — Dec 2026
<i>Master of Science in Computer Engineering (Specialization in Machine Learning)</i>	<i>New Brunswick, NJ</i>
<u>Coursework</u> : Multimodal AI, Reinforcement Learning, Machine Vision, High Performance/Distributed Computing	
Rutgers University - School of Engineering	Sep 2021 — May 2025
<i>Bachelor of Science (Triple Major) in Computer Engineering, Computer Science, and Data Science</i>	<i>New Brunswick, NJ</i>
Recipient of the Eleanor and Samuel Sneath Endowed Merit Scholarship for Engineering Students	
<u>Coursework</u> : AI, ML, Distributed Deep Learning, Data Science, Robotics and Computer Vision, Info and Network Security	

## SKILLS

- **Programming Languages:** Python, R, SQL, Java, C/C++/CUDA, JavaScript/TypeScript, Rust, Bash
- **AI/ML:** NumPy, PyTorch, JAX, TensorFlow, Keras, Pandas, Scikit-Learn, OpenAI API, LangChain/LangGraph, OpenCV, DSPy, RAG, HuggingFace (Transformers, Tokenizers, Datasets, Diffusers), vLLM, pgvector, Pydantic, FastAPI, NLTK, spaCy
- **Data Visualization:** Matplotlib, Seaborn, Plotly, Tableau
- **Cloud & DevOps:** AWS, Microsoft Azure, OCI, GCP, GitHub Actions (CI/CD Pipeline), Docker, Kubernetes, Slurm
- **Tools & Databases:** Jupyter, PySpark, Kafka, Git, Linux (Ubuntu), PostgreSQL, MongoDB, Jira, ROS, Codex, Claude Code

## CERTIFICATIONS

- AWS: [Certified Cloud Practitioner](#), [Certified Machine Learning Specialist](#), [Certified AI Practitioner](#)
- Oracle (OCI): [AI Foundations Associate](#), [Generative AI Professional](#), [Data Science Professional](#), [Vector AI Search Professional](#)

## WORK EXPERIENCE

AI Engineering Intern	May 2024 — Sep 2024
Altair Inc.	<i>Remote</i>
• Developed a Python-SQL compression script for form data, <b>reducing storage costs by 7%</b> for enterprise clients	
• <b>Accelerated mean response time by 96 milliseconds</b> by integrating PyTorch inference models into Kafka microservices	
• Created a <b>&gt; 1TB RAG system</b> , utilizing A/B testing to evaluate and optimize AI-powered search accuracy	
• Optimized CI/CD pipeline to <b>speed up build times by 13%</b> in an Agile environment, ensuring efficient development cycles	

## PROJECTS

raceformer	<a href="https://bit.ly/raceformer">https://bit.ly/raceformer</a>
• Engineered a high-fidelity “Real-to-Sim” validation pipeline processing <b>30GB of multimodal sensor data</b> (LiDAR, camera, radar) on 4x A100s, utilizing JAX-based vision-language model to generate ground truth scenarios for critical edge case simulation	
• Achieved a <b>95% pass rate on safety metrics</b> by leveraging geometric priors to fine-tune RL policies, establishing clear performance baselines and <b>outperforming standard models by 35%</b> in collision avoidance testing	

dexMCP	<a href="https://bit.ly/dexmcp">https://bit.ly/dexmcp</a>
• Engineered Model Context Protocol (MCP) server exposing <b>5+ reusable tools</b> and <b>5+ Pydantic models</b>	
• Implemented parameter validation across <b>20+ typed fields</b> and <b>100% of tool inputs</b>	
• Built asynchronous clients using DSPy and LangChain to auto-discover tools and execute multi-step requests	

DocuMint	<a href="https://bit.ly/DocuMint">https://bit.ly/DocuMint</a>
• Built a 5-agent LangGraph + Gemini API doc-modernizer with Gradio, achieved <b>90%+ modernization coverage</b> on sample docs, <b>cut manual edit time by 50%</b> with a <b>4-tab UX</b> , hardened with <b>8 deterministic pytest cases</b> and network-safe skips	
• Authored a modular multi-agent system with structured prompts and severity-prioritized research, <b>lifting modernization accuracy by 35%</b> and <b>trimming LLM API spend by 20%</b>	

SuperconGAN	<a href="https://bit.ly/3z7JaqZ">https://bit.ly/3z7JaqZ</a>
• Built a PyTorch-based GAN to create synthetic superconductivity data of various materials, enhancing generative AI applications	
• Extracted and processed <b>80,000+ dataset entries</b> from the UCI ML Repository using Pandas efficiently	
• Released Python package on PyPI, achieving over <b>80,000 downloads</b> and widespread adoption	