Rajeev Atla

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Education

Rutgers University - School of Engineering Sep 2025 — Present
MS in Computer Engineering (Specialization in Machine Learning) *New Brunswick, NJ*

Coursework: Reinforcement Learning, Multimodal AI, High Performance/Distributed Computing

Rutgers University - School of Engineering Sep 2021 — May 2025
BS (Triple Major) in Computer Science, Computer Engineering, and Data Science *New Brunswick, NJ*

Eleanor and Samuel Sneath Endowed Scholarship (awarded to 10 engineering students/year)

Coursework: AI, Distributed Deep Learning, Data Science, Statistical Learning, Computer Vision

Skills

- **Programming Languages**: Python, R, SQL, Java/Scala, C/C++, Rust, Elixir, MATLAB, Bash
- **Libraries/Frameworks**: NumPy, PyTorch, TensorFlow, Keras, Pandas, Scikit-Learn, NLTK, LangChain/LangGraph
- **Data Visualization**: Matplotlib, Seaborn, Plotly, Tableau
- **Cloud & DevOps**: AWS, Microsoft Azure, Vercel, GitHub Actions, Docker, Kubernetes
- **Tools & Databases**: Jupyter, Apache Kafka, Git, Linux (Ubuntu), PostgreSQL, MongoDB, Jira

Work Experience

Software Engineering Intern May 2024 — September 2024
Atlait Inc. *Remote*

- Developed a Python-SQL compression script for form data, **reducing storage costs by 7%** for enterprise clients
- Integrated PyTorch inference into Kafka-microservices architecture, **improving mean response time by 96 milliseconds**
- Updated codebase from ES5 to ES7 using HTML, CSS, and TypeScript, resulting in **23% faster mean page loads**
- Optimized CI/CD pipeline to **speed up build times by 13%** ensuring efficient development cycles

Projects

dexMCP https://bit.ly/dexmcp

- Engineered Model Context Protocol (MCP) server exposing **5+ reusable tools** and **5+ Pydantic models**
- Implemented parameter validation across **20+ typed fields** and **100% of tool inputs**
- Built asynchronous clients using DSPy and LangChain to auto-discover tools and execute multi-step requests

SuperconGAN https://bit.ly/3z7JaqZ

- Built a PyTorch-based GAN to model superconductivity data, enhancing generative AI applications
- Extracted and processed **80,000+ dataset entries** from the UCI ML Repository using Pandas efficiently
- Released Python package on PyPI, achieving over **63,000+ downloads** and widespread adoption
- Authored a LaTeX paper on findings and future scope, **incorporating 500,000+ data points** effectively

IMDB Movie Review Sentiment Analysis https://bit.ly/3C3RpWK

- Led **team of 5** to use Scikit-learn and Pandas to classify IMDB movie reviews
- Implemented a F1-based linear term-frequency bigram NLP model to **achieve 90.5% accuracy**
- Extracted data from **25,000+ movie reviews** with Pandas and **removed 20+ stopwords** to improve model performance
- Created confusion matrices and data visualizations for **5+ models** using Seaborn

Cityscape (2nd Overall at HackExeter 2021) https://bit.ly/3OZjJ07

- Led a **team of 4** in designing and implementing a city tour mobile app, resulting in **100+ vivid city tours** for users
- Wrote controllers and models for MongoDB using MongooseORM to store **30+ kB of geographic data** in NoSQL schema
- Built mobile user interface allowing users to search, review, rank, and explore **100+ tours** using Flutter/Dart
- Constructed REST API using Express.js and nodemon to **increase development velocity by 20%** with hot-reloading

EyeQ https://bit.ly/3RsAyBL

- Developed Elixir-Rust NIF application to transcribe images and documents **up to 1 GB in size**
- **Reduced Docker image size by 53%**, accelerating the build pipeline
- Improved and streamlined Phoenix server and React dashboard to ensure **average latency is $<$ 3s**