

ACHYUTH MADABHUSHI

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Education

1. **Carnegie Mellon University, M.S.**
2. **University of Delaware, B. Eng.**

Experience

1. Senior Machine Learning Engineer, Steampunk, 2023 - Present

- A. Prototype, build, architect the first enterprise retrieval augment generation based LLM application using FastAPI, Python, LangChain, AWS and Chainlit.
 - A. Worked with internal R&D team to harden a prototype application for deployment in a secure IL4/IL5 production environment using helm charts, docker containers and git
 - B. Led implementation of testing strategies, refined and iterated on API design
 - C. Build design patterns for teams to emulate as part of Steampunk's AI Lab, mentoring several teams on best practices for software engineering
- B. Design and deploy terraform modules configuring Databricks resources for enterprise wide implementation at the Coast Guard's Office of Data and Analytics
 - C. Serve as AI/ML researcher and subject matter expert for US Coast Guard's CTO
- A. Wrote white paper on AI attack tree generators application for use in a coast guard disaster planning hackathon

2. Senior Staff Data Architect, Johns Hopkins Applied Physics Lab, 2022-2023

- A. Sensitive national security work - under NDA: Deployed a prototype machine learning application to a production level containerized application enabling rapid reporting

3. Lead Data Engineer, Thomson Reuters Special Services, 2020 - 2022

- A. Led the data engineering effort of a new data platform ingesting up to 500 gb/day from 15 different data vendors
 - A. Built the data platform in Snowflake using Apache NiFi for orchestration and AWS S3 for storage
 - B. Documented failures to develop recommendations and lessons learned
 - C. Set up version control in GitLab to allow for increased code re-use between Data Engineering and Data Science teams
 - D. Scaled the team from myself initially, to 3 developers after 6 months
 - E. Data Platform product was awarded a \$15M multi-year contract
- B. Developed a scalable full text search application to process big data to enable cyber crime investigations

4. Research Software Engineer, RAND Corporation, 2018 - 2020

- A. Maintained an enterprise HDFS cluster enabling 250 researchers to use machine learning tools
- A. Performed upgrades and migrations on the cluster independently.
- B. Built a machine learning classifier application using support vector machines to assist developing budgets for the government of Puerto Rico using Python, Django and MongoDB
- A. Resulted in a 84.2% accuracy of classification