ADITYA RATAN JANNALI

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OBJECTIVE

Seeking a challenging position in a dynamic organization that values creativity, collaboration, and a strong desire to build products that benefit our society.

EXPERIENCE

Amazon Aug 2021 - Aug 2023
Application Engineer III *Chennai, India*

- Front-line support to AEE, and MENA Data Engineering Team. Brought 35% decrease in incoming tickets from FY 2022-23, saving 20hrs/month of engineers' time by leading the OE Ticket Reduction Campaign.
- Built a QuickSight dashboard equipped with integrated analysis and forecasting capabilities for tickets. This data pipeline was created to assist leadership in reviewing the team's goals and prioritization efforts.
- Designed, and developed a plugin that projects pipeline health and usage statistics for 20+ teams across the organization. This solution, with AWS IAM, Athena, and Redshift, and Python as the backend.
- Built an ETLM (Extract Transform Load Management) pipeline capable of aggregating costs per user across various data querying modes (SQL client/spectrum/redshift/AWS Quicksight, etc.).

Amazon Jan 2021 - July 2021
Software Support Engineer Intern II *Chennai, India*

- Designed, developed and rigorously tested an automated tool utilizing internal APIs, AWS S3, IAM, Redshift, and Python as the backend. This tool efficiently collects service metrics and their statistics, then disseminates aggregated performance metrics to the respective teams responsible for those services.
- Significantly improved a monthly Operational data report generator by rectifying bugs and introducing additional metrics essential for over 20 teams across the organization.
- Assumed the role of a release engineer, taking ownership of the production deployment for multiple pipelines while ensuring their smooth operation.

Antpod April 2020 - Dec 2020
System Development Intern *Chennai, India*

- Involved in research and the development of a proof of concept for an unmanned vehicle in the 'Land Stress Identification and Remote Sensing' field.
- Created a CNN model using Keras and TensorFlow to effectively function as a multilabel image classifier.
- Fostered collaboration with various clients to gain insights into the role of their product within the company's overarching roadmap.

EDUCATION

Masters in Artificial Intelligence, Sept 2023 - May 2025 (expected)
Northeastern University (GPA: 4) *Boston, MA*
Courses - Machine Learning, Foundations of AI, Algorithms, Programming Design Paradigms

Bachelor of Technology in Electronics and Communication Engineering, July 2017 - June 2021
Vellore Institute of Technology (GPA: 9.11) *Chennai, India*
Courses - Calculus, Statistics, Linear Algebra, Probability Theory, Digital Image Processing, Data Structures

SKILLS

Languages	Python, Java, C++, SQL (MySQL, and PostgreSQL), HTML, shell, CSS, JS
Libraries	transformers, numpy, gym, pytorch, pygame, pymunk, Keras, TensorFlow, sklearn, pandas, OpenCV, matplotlip, seaborn
Frameworks	Huggingface, git, AWS - Redshift, Quicksight, S3, Secret Manager, IAM, EC2, ECS, VPC, Sagemaker, Athena, DynamoDB, Amazon MWAA, Cloudformation, KMS
Softwares	Tableau, Anaconda, Ultimaker cura
Certifications	Coursera - Machine Learning, Deep Learning, CNN, NLP, Digital Image Processing
Softskills	Team management, Ownership, Deliver results, Bias for action

PROJECTS

Detecting LLM-Generated Text Using Fine-Tuned Transformers: A Comparative Study - [github] In this work, we finetune and evaluate two compact but powerful transformer models, ALBERT and DeBERTa-XS, on the DAIGT Proper Train dataset to detect LLM-generated essays. Our experiments show that both models perform quite well, with DeBERTa-XS achieving 99.43% accuracy and ALBERT achieving 96.57% accuracy. We analyze the results and discuss potential directions for future work. Overall, these findings demonstrate the feasibility of using finetuned transformer language models as a potential solution for LLM text detection.

Image Processor - [github] Designed, implemented, and thoroughly tested an MVC for an image processing application that performs image manipulative operations. The controller implements a command design pattern to process user activity.

S.H.A.P.E.R. - [github] Collaborated in developing the collision handler and environment setup of an AI simulated hand that deflects an incoming object from hitting its target to a different goal post. The uniqueness of the project is the use of genetic algorithms to train a neural network that predicts the position of the arm.

Linked Sparse Matrix Structure - [github] Represented a square matrix as a linked structure and row heads so that the new data structure stores only non-zero elements. This reduced the compute time taken to perform multiplication and other arithmetic operations to O(klog n) compared to the conventional O(n^2) method.

STUDENT ROLES

- Co-founder and Vice President of Robotics Club, Northeastern University (March 2024)
- Graduate Teaching Assistant - CS5100, Foundations of AI (Jan 2024 - Apr 2024)
- Chairperson for IEEE Student Branch, VIT Chennai (Jan 2020 - Jan 2021)
- Program Representative, Electronics and Communication Engineering, VIT Chennai (Aug 2019 - Apr 2020)

CONTESTS

- Third place, Optical Networks Make-A-Thon, VIT Chennai (Feb 2019)