Adarsh Thoke

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EDUCATION

University of Colorado Denver, M.S. in Computer Science (Project Track) (3.4/4.0)   *Expected May '24*
Relevant Coursework: Machine Learning, Computer Vision, Big Data Science, Artificial Intelligence, Deep Learning, Advance Computer Architecture, Operating Systems and Algorithms.
University of Mumbai, Bachelor of Engineering in Information Technology   *2016 - 2020*

SKILLS

Programming Languages:	Python, Java, SQL, HTML, CSS, JavaScript
Data Management:	MongoDB, Redis, Apache Kafka, Apache Spark.
Technologies/Tools:	Pandas, NumPy, Matplotlib, Snowflake, Docker, Kubernetes, TensorFlow, PyTorch, AWS, CI/CD, Natural Language Processing, Flask, A/B & Hypothesis testing, SpringBoot, Git (Version Control).

EXPERIENCE

Research Assistant   *June '23 - Present*
College of Engineering, Design and Computing, University of Colorado   *Denver, CO*
Supervisor: Prof. Liang He
- Leading ARADISS (Adaptive Real-time Anomaly Detection and Identification for Space Systems) a **NASA** funded research project on anomaly detection and identification in battery-powered vehicular systems in collaboration with Global Technology Connection, Inc.
- Designed an algorithm significantly impacting the ARADISS framework's ability to differentiate Dependent (Cascaded) and Independent (Non-Cascaded) anomalies.
- Used **statistical** metrics to extract new features from the electric propulsion system dataset, performed data preprocessing, and trained an XGBoost model. The algorithm achieved an accuracy ranging from 92% to 96%.
- Integrating anomaly detection and identification framework into an end-to-end system, leveraging graph-based results for enhanced anomaly visualization and understanding.

Software Engineer   *Nov '20 - July '22*
Reliance Jio Platforms Ltd   *Navi Mumbai, India*
- Developed new features and implemented RESTful web services for the Customer Management Portal, enabling it to send promotional templates to over 400 million users.
- Created streamlined access to WhatsApp Business API keys for Jio promotional templates and deployed them on the server. Optimized system performance with Kafka and Redis and comprehensively documented the system.
- Collaborated with the Customer Experience Team to enhance product analytics and user experience for JioCare's live chat on WhatsApp, HelloJio, and MyJio, leveraging consumer behavior insights.
- Defined Key Performance Indicators (KPIs), tested 2000+ queries, and planned business strategies, resulting in an 8% increase in customer acquisition within three months.

PROJECTS

Student Performance Indicator   *Data Science '24*
- Trained Decision Tree, K-nearest neighbors, boosting, and bagging models, performed EDA, data transformation, and designed a data pipeline deployed on Microsoft Azure.
- Achieved optimal model selection using R-squared (R2) metrics to capture variability in student performance data.(GitHub)

Hand Gesture Control System   *Computer Vision '23*
- Created a Real-Time system using OpenCV, and Mediapipe for efficient hand-tracking video frame capture from a webcam.
- The system accurately followed hand gestures to execute commands, delivering improved responsiveness.(GitHub)

Categorizes reviews into 1 or 5 stars based on the text content.   *NLP '23*
- Implemented text tokenization techniques and Multinomial Naive Bayes Classification Algorithm to preprocess textual data for rating hotels.
- Results show a precision value of 92% and a recall value of 93%. (GitHub)

Smart Vehicle Assistance System   *Deep Learning '23*
- Developed an end-to-end Traffic Signal Recognition Web Application with a Keras Convolutional Neural Network model using Python, Flask, and ReactJs.
- Achieved 95% average accuracy, demonstrating effective handling of unstructured data.(GitHub)

Dynamic Pricing of food products to reduce wastage   *Machine Learning '22*
- Implemented pricing reduction strategy using defined parameters like expiry dates to enhance sales and minimize discarded inventory.
- Generated a dataset with 1000+ different food products, performed data mining, and data modeling using supervised learning (Linear Regression). Demonstrating proficiency in Python, Jupyter, and **sci-kit learn**. (GitHub)

CERTIFICATES AND EXTRA-CURRICULAR ACTIVITIES

- Udmey: Python for Data Science and Machine Learning Bootcamp.   *2023*
- Letter of Appreciation from the Department Head for the Code Refactoring Seminar.   *2021*
- Won 50,000 INR Prize and Certificate of Appreciation from Navi Mumbai Municipal Corporation and United Nations Development Program for the development of a snake bot designed for utilization in natural calamities   *2019*
- Organized TEDxDYPatilUniversity event, "EVENTS HEAD" for the Annual College Cultural Fest.   *2017-2019*