AISHWARYA VANTIPULI

217-695-4626 | vantipuli.a@northeastern.edu | | | Portfolio

EDUCATION

Northeastern University, Boston, MA Jan 2019 – May 2021
Master of Science in Data Science **GPA** - 3.6

- **Related Courses:** Supervised & Unsupervised Machine Learning, Natural Language Processing, Algorithms.

Jawaharlal Nehru Technological University, Hyderabad, India Sep 2013 – May 2017
Bachelor of Technology, Information Technology **GPA** - 3.6

- **Related Courses:** Data Structures, Artificial Intelligence, Information Retrieval Systems, Databases.

TECHNICAL KNOWLEDGE

Languages: Python, C, Java, HTML, CSS, XML
IDE/Tools: Alteryx, Airflow, Tableau, AWS SageMaker, EC2, S3, Glue.
Libraries/Packages: NumPy, Pandas, Scikit-learn, Matplotlib, TensorFlow, PyTorch
Databases: MYSQL, SQL Server, Oracle, MongoDB, Google BigQuery

WORK EXPERIENCE

Cincinnati Children's Medical Research Center, Ohio Jan 2022 – Present
AI/ML Research Scientist

- Published a paper on Pediatric Bone age Prediction of traumatic hands using a new PyTorch based framework for deep learning in Healthcare imaging by NVIDIA named **MONAI**
- Streamlined a data versioning tool named **DVC** into the workflow to build pipelines and various data science experiments efficiently for building data pipelines and hyperparameter tuning.
- Conducted various workshops for best practices in software development and ETL workflows. Managing a tech community to establish connections, conduct seminars and discuss Q&A within the organization.

SAP America, Pennsylvania Sep 2020 – Jan 2021
Intelligent Data Management, Intern

- Leveraged predictive forecasting using **ARIMA** models for predicting future travel expenses of SAP employees over the next quarter which led to better budget planning and **30%** cost savings.
- Extracted meaningful business insights from data and identify the stories behind the patterns, distilling complex analysis, and concepts into concise business-focused takeaways using **Tableau**.
- Investigated new technologies and methods across data science, ML, and data engineering to improve technical capabilities such as detecting/correcting invalid physical addresses.

Younify, Hyderabad, India May 2017 – Dec 2018
Data Scientist

- Architected and developed scalable **A/B** testing solutions that run on AWS SageMaker cloud environment. Delivered ML products to clients which led to substantial increase in profits up to **60%**
- Managed dashboards and visualizations for the business stakeholders and maintained the integrity of the reports. Ability to define problems, collect data, establish facts, and to draw valid conclusions.
- Processed a large amount of data to understand certain trends/patterns, carried out correlation analysis.

ACADEMIC PROJECTS

Text to Image Generation
Skillset : Computer Vision, Natural Language Processing (NLP), Generative adversarial networks (GANs).

- Developed a two-stage generative adversarial network for generating photo realistic images from textual descriptions on (CUB) Dataset by training Generator & Discriminator in a Min-Max game.
- Measured performance of the model using Inception score, KL divergence loss along with human evaluation. Honored with best capstone project in class award among 20 groups.

Plagiarism Detection
Skillset : NLP, Text Analytics, K-Means Clustering, FP-Growth, PCA, TSNE.

- Examined 100K documents which contains textual answers given by students with different levels of plagiarism. Implemented Clustering & FP-Growth Algorithm to detect target students with 95% precision.
- Formulated a new strategy to increase the model efficiency by using Dimensionality Reduction Methods like PCA, TSNE and calculated containment and longest common subsequence (LCS) scores.

Diabetic Retinopathy Detection
Skillset : Image Classification, Convolutional Neural Networks, Multi-Layer Perceptron, Transfer Learning.

- Devised an automatic DR grading system capable of classifying images based on disease pathologies from four severity levels using Image Classification.
- Compared performances of Logistic Regression, CNN, KNN, MLP and Inception v3 on High Resolution Retina Images and achieved an accuracy of 93% on CNN.