AISHWARYA VANTIPULI

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EDUCATION

Northeastern University, **Boston, MA** Jan 2019 – May 2021

Candidate for a Master of Science in Data Science (MSDS) **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 (IT) **GPA** - 3.6

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

TECHNICAL KNOWLEDGE

Languages: R, Python, C, Java, HTML, CSS, XML

IDE/Tools: Power BI, Tableau, AWS, EC2, Lambda, Git, Kafka, Apache Spark, Elastic Search

Libraries/Packages: NumPy, Pandas, Scikit-learn, Matplotlib, TensorFlow, PyTorch

Databases: MYSQL, MongoDB, DynamoDB, Hive, Cassandra

ACADAMIC PROJECTS

Text to Image Generation

Keywords : 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 Caltech-UCSD Birds (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

Keywords : NLP, Text Analytics, K-Means Clustering, FP-Growth, Encoder-Decoder, Transformers.

- Examined 100K documents which contains textual answers given by students which were labeled with different levels of plagiarism. Implemented Clustering & FP-Growth Algorithm to detect target students with 95%precision.
- Built two language translation engines. One translates Vietnamese to English and other translates Chinese to English, using Auto-Encoder-Decoder type model with Attention.

Diabetic Retinopathy Detection

Keywords : 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. F1 score, ROC and AUC are used to evaluate performance.

WORK EXPERIENCE

SAP America, Pennsylvania Sep 2020 – Jan 2021

Intelligent Data Management, Intern

- Programmed time series **ARIMA** models for analyzing and forecasting sales of several consumer products at large scale retail organizations.
- 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.

Northeastern University, Boston Jan 2019 – Sep 2020

Research Scientist

- Engineered a wireless charging device for Electronic Vehicles (EVs) in Embedded Systems powered by Artificial Intelligence.
- Generated on-board device's heatmaps using **LSTM+CNN** Time-Series model given input signal distributions; eliminated noisy frequencies using Custom Low Pass Filters and Fast Fourier Transforms.
- Implemented data generation using **GANs**, **VAEs** to extend model to new devices and positions and reduce data collection time by **65%**

Younify, Hyderabad, India May 2017 – Dec 2018

Data Scientist

- Proposed Business insights for **NISSAN** using Instagram Analytics. Data is extracted using **Instagram API**.
- Maintained an **Image Recognition** Application for Image organization and classification of photo libraries using **Computer Vision** and **Keras** which helped in attracting and retaining customers.
- Designed an Interactive chatbot using **Google Dialog Flow**. Increased bot's performance by 60% by integrating various APIs and Machine Learning to give best user experience.