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** - 3.5

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

Jawaharlal Nehru Technological University, Hyderabad, India Sept 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, SQL, shell scripting, C
IDE/Tools:	RStudio, Jupyter, Tableau, Eclipse, Advanced Excel, Git
Libraries/Packages:	NumPy, Pandas, Scikit-learn, Matplotlib, TensorFlow, PyTorch.
Systems:	Windows, UNIX, Linux

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.

- Created 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 EXPIRIENCE

Northeastern University, Boston Jan 2021 - Present

Graduate Research & Teaching Assistant

- Working on improvement of target object search solutions under partial observability with deep reinforcement learning and Monte Carlo Tree Search using **PyTorch** and **OpenAI** Gym.
- Tutor and instruct students on concepts in courses, Algorithms and Python for Data Science and coordinate with Professor in creating, grading the assignments and exams.

SAP America, Newton Square Sept 2020 – Jan 2021

Intelligent Data Management, Intern

- Developed 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.
- Researched 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

- Proposed Business insights for **NISSAN** using Instagram Analytics. Data is extracted using **Instagram API**.
- Developed **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.