Mehul Gupta

Data Scientist @ DBS

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Summary

Experienced Data Scientist with 4+ years of expertise in developing data-driven solutions for Healthcare and Financial domains. Proficient in solving complex problems using AI, including Generative AI, Reinforcement Learning, NLP, Computer Vision, Classification, and Regression. Active technical blogger and vlogger

Work experience

Associate Data Scientist

Jan'22 - Present

DBS Bank

- Trained and deployed **text multi-label classification** model over an imbalanced dataset with ~500 labeled financial articles and 16 classes for generating geographical labels using semi-supervised learning. Macro F1 Score: 85%.
- Designed an **Anomaly Detection** system to track monthly usage patterns for BI Tools reducing dashboard failures by 50%.
- Automated metadata creation for production tables reducing manual efforts and human error by 100% at <1 sec/table.

Data Scientist July'20 - Dec'21

Tata 1mg

- Formulated Lab Labeler for information extraction from lab reports by detecting important regions and extracting text sequences digitizing 4k reports daily & already parsed 3 Million historic reports covering 90% of total reports received.
- Established pipeline for Lab reports digitization using Airflow & AWS Lambda Function parsing reports at 1 report/sec.
- Ideated & analyzed patient summaries increasing user footfall on the Health Records section of the Tata 1mg app by 25%

Data Science Intern May'19 - June'20

Tata 1mg

- Concocted algorithms for medicine names extraction Printed & Handwritten prescription images namely 'C-Cube' & '3 Step Filtering' reducing the time taken for manual verification by 50%. 10% of all orders are completely automated.
- Fine-tuned NIMA(Neural Image Assessment) for scoring Prescription images Using TF-Lite, model size reduced to nearly 1/10 of the original size for deployment purposes.

Founder & Editor May'19 - Ongoing

Data Science in your pocket

A medium publication and YouTube channel covering intermediate concepts in Data Science with 50k+ views/month

Publications

- Author: Algorithms for rapid digitization of prescriptions, Visual Informatics (Elsevier, 2021), 4 citations
- Co-Author: Attended robotic process automation of prescriptions' digitization, Smart Health (Elsevier, 2021), 5 citations
- 100+ Data Science blogs ranging from Reinforcement Learning, Time Series, GANs, Transformers in NLP, etc.

Core Skills

- Machine Learning and Deep Learning
- Data Analytics
- RDBMS, Cassandra, Neo4j
- Python, Java & C++
- Tableau, Metabase
- · Apache Airflow
- Comet ML
- Pyspark
- AutoML

Relevant Projects

Data Science Portfolio using Streamlit

Portfolio website developed using Streamlit with features like graphs, pagination, carousels, etc.

OpenAl gym environment training using reinforcement learning

Applied DQN, REINFORCE algorithm, and Actor-Critic method to multiple OpenAl gym environments.

Multiple GAN implementation

- Season translation (Summer-->Winter, Winter-->Summer) using CycleGANs
- Image generation for Fashion dataset using Vanilla GANs, PixelCNNs, and Conditional GANs

Vehicle Number Plate Detection

Vehicle number plate detection & extraction of Registration numbers using YOLOv3 object detection. mAP = 98%

Classification using Few-Shot Learning

Image binary classification with Siamese Network using Contrastive loss. F1 score: 95%

Education

B.Tech. 2016 - 2020

Indian Institute Of Information Technology , Design and Manufacturing Jabalpur 8.1 CPI (CSE)

Senior Secondary 2015 - 2016

Bharatiya Vidya Bhavan's K.D.K.V.M 94.2% (C.B.S.E)

High School 2013 - 2014

Bharatiya Vidya Bhavan's K.D.K.V.M 10 CGPA (C.B.S.E.)

Certificates

- Data Scientist Career Track (Data Camp)
- Data Analyst Career Track
- Statistical Thinking In Python

Link to Certificates

Achievements

- Top Writer in Artificial Intelligence, Medium.
- 1.7k+ reputation on stack overflow.
- Guest Speaker, Neo4J Live
- TCS HUMAIN finalist (Al competition organized by TCS, 2019)
- Shikshan Bharati Kulapati K.M. Munshi Award in Mathematics(2014)
- Bharatiya Vidya Bhavan Shri C. Subramaniam Award for excellence in character(2008-2009,2011-2012)
- Certificate of Merit(Proficiency in Co-curricular activities) for Declamation and Extempore
- Guitarist, Drummer, and Kalimba player in free time