

SHIVAM SHRIVASTAVA

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Education

Indian Institute of Technology Kharagpur

Aug 2018 – May 2023

Dual Degree in Chemical Engineering and Micro-Specialisation in Artificial Intelligence

CGPA: 8.97/10

Experience

Microsoft | *Data and Applied Scientist*

Jul 2023 - Present

Digital Natives Propensity Pipeline

- Engineered a scoring model for **0.1M+** digital native accounts to estimate the propensity of an account maturing into a transacting customer
- Achieved an AUC of **0.64** with XGBoost by employing AutoML on AzureMLStudio and comparing **20+** models in terms of AUC and precision
- Utilised Shapley values to quantify the impact of **6** feature categories - funding, tech stack, job postings, leadership, news and business indices
- Setup a weekly metrics tracking Grafana Dashboard to capture - top 3 positive and negative reasons, count of low and high propensity accounts

Deal Team and Partner Path Recommendation

- Engineered an end-to-end pipeline to recommend the optimal sellers for open opportunities, enhancing team efficiency and deal-velocity
- Curtailed the processing time by **30** times and scaled the pipeline to handle data volumes **500** times by implementing Az AI Search and FAISS
- Developed 2 path recommendations for partners by selecting the top 2 nearest clusters via Euclidean distance, enhancing decision-making
- Applied **T-SNE** technique to validate clustering algorithm performance, corroborating silhouette score results and optimising the recc engine

Microsoft Global Hackathon | *1st out of 1294 participants*

August 2023 - Present

Root Cause Analysis Copilot

- Pioneered a solution-bot integrating AI to reduce disasters, minimize downtime, enhance productivity, and promote continuous improvement
- Leveraged **LangChain** agents and **Copilot Studio** to deliver an interactive chatbot experience comprising data collection and vector search
- Adopted the **5-Whys** technique to collect diagnostic information and a multi-agentic workflow to convert natural language into an SQL query

Competitions and Conferences

Competitive Coding and Olympiads

- Active **Expert** on Codeforces with a rating of **1654** and a **5 star** coder on Codechef with max rating of **2103** with global best rank of **33**
- Google KickStart** - Global rank of **88** in Round G '21, **351** in Round C '21, **437** in Round H '22, **561** in Round B '22, **617** in Round D '22
- Attained **Zonal Rank-3** and **International Rank-77** in NSO 2018 and **Zonal Rank-2** and **International Rank-92** in IMO 2018 by SOF
- Adjudged the best **All-Round** student of Class 12 and received the **TATA Hitachi** Award by TATA MOTORS Limited, Jamshedpur
- Amongst the top **10%** students of **1400** first years to get a Department Change from Manufacturing to Chemical Engineering

Computer-Supported Collaborative Case Study Analysis | *MAALIC Symposium 2021, Malaysia*

- Built a live platform to quantitatively analyse online group discussions on Whatsapp and produce individual performance scores instantly
- Scrutinised **50+** Whatsapp Discussion text files to produce 10 performance features using NLTK and RE, thereby saving 100+ person-hours
- Incorporated features like **Sentiment** Analyser, **Emoticon** Extractor, Message **Classifier**, **Wordcloud**, and Extractive **Summarization**

Intel AI Entrepre-Neural - A Deep Learning Competition | *Runners Up*

- Modeled **Autismo** (as a Web App) - A Toddler Autism detection model using both facial images and a screening test for diagnosing Autism
- Obtained an accuracy of 98% and 88% by deploying **RFC** for classification using question set and by using **VGGFace** Model, respectively
- Reduced the total inference time from **61.77** seconds to **45.764** seconds and improved autistic recall from **0.83** to **0.92** by using OpenVino

Projects

Deep Learning Project | *UCL London*

April 2021 - July 2021

- Pioneered a platform to integrate effects of influential content from Twitter, FT News and TikTok with time-series stock data of companies
- Established a website on ECFRI to serve 20+ universities to develop algorithms using NLP for targeted company sentiment analysis
- Scrapped **1000+** tweets using snsrape and generated embeddings using **FinBert**, **SBert**, **GloVe** and **Google Universal Encoder**
- Engineered an **LSTM** Model to acquire an enhanced R2 score of **0.98** and RMSE of **2.34** using Technical Analysis on S&P 500 ES Data

Deep Cleaning using LFADS | *University of Montreal, Canada*

May 2020 - Jul 2020

- Conserved **100+** hours of manual cleaning of MEG Data by designing a deep learning architecture based on LFADS on ComputeCanada
- Implemented a non-linear **Recurrent Neural Network-based autoencoder** framework which applies to the field of MEG Research widely
- Yielded a refined training and validation loss of **0.005** by conducting **5-Fold** cross-validation on Graham server using **20** subjects' data

Skills and Expertise

Languages: C++, Python, Java, Kotlin, C, SQL, Spark **Libraries and Tools:** Android, HTML, CSS, JavaScript, Scikit-Learn, Azure, Pandas, Spark, Databricks, Latex, Numpy, Pytorch, Tensorflow, Keras, NLTK, Spacy, RE, OpenCV, Matplotlib, Seaborn, Django, Github, Git, SSH **Relevant Courses:** Programming and Data Structures, Differential Calculus, Data Analytics, Machine Learning Foundations and Applications, Deep Learning Foundations and Applications, Artificial Intelligence Foundations and Applications, Probability and Statistics, Integral Calculus, Transform Calculus, Algorithms - 1, NLP, Artificial Intelligence for Manufacturing, Algozenith (DSA), OOPS

Extra Curricular Activities

- Zonal Football Player: Represented school in zonal football tournaments, showcasing strong teamwork, strategic play, and athletic proficiency
- Design and Media Head, Spring Fest 2021 : Led digital and print media publicity reaching 800+ colleges, 550+ corporates, and 270,000+ subs
- Chief Editor, Awaaz, Student Media Body : Launched the first colored newsletter design and conducted 50+ fundraisers, raising over INR 1 Crore during the Covid pandemic. Published insights on issues such as mess problems, elections, placements, championship events
- Guitar Player: Performed at school, company events and local music festivals; collaborated with fellow musicians for over 5 years