Trishul Chowdhury (trishulchowdhury.23@gmail.com | (INDIA)+91- 9008638193)
LinkedIn: www.linkedin.com/in/trishulchowdhury/

Data & Digital transformation Lead and AI strategist with 9+ years of extensive experience in Predictive & Prescriptive Analytics , designing/managing end to end AI products and implementation of different Machine Learning methodologies to solve critical business problems incorporating AI-driven solutions using different Deep Learning models ,NLP and Computer vision algorithms

INDUSTRY EXPERIENCE

➢ *Condé Nast, Bangalore —Principal Data Scientist , May 2022 – Present*
- Responsible for Condé Nast's Data & Analytics function and setting out the data strategy, leading analytics transformation & driving **AI-driven Content Intelligence** initiatives to get actionable insights, partnering with **Marketing & Commercial Science , and building in-house AI Data Products**

➢ *IQVIA, Bangalore — Lead AI Scientist, February 2021 – February 2022*
- Designing **data curation mechanism** to convert the clinical data (Health Care) to machine- readable and searchable text with **OCR engine** and **Text summarization** using NLP algorithms for **Robotic Process Automation (RPA)**
- Built product of **Explainable AI** of Deep sequential model **(CRF-LSTM)** using local Surrogacy and other XAI approaches
- Implementing **MLOps** pipeline in the in-house cloud server to maintain ML Model's **drift and retraining mechanism**

➢ *Diageo, Bangalore – Data Science Consultant, September 2019 – February 2021*
- **Media Benchmarks and Insights:** Created an actionable insights-driven summary by market/channel and media investment portfolio analysis
- Analyzing consumers temporal behavior using **Hierarchical Bayesian techniques (LDA)** and **BERT (Hugging Face)** Technology **(State of the art Model)** to leverage a Product assortment recommendation engine to **recommend SKUs to 700K+ Off-trade and On-trade business in USA (Achieved a 2.8 % NSV growth in deployed markets)**
- Managed cross-functional team and stakeholder communication and oversaw product development from inception to implementation leveraging tangible business outcomes
- Digital **Market Mix Modelling (MMM)** for E-commerce & Brand Homes across Ireland, Scotland, & the US using **Linear Programming methods**. It helped to optimize the Digital (Search/Social) spends with smart consumer segments. **Estimated achievable sales value uplift of ~ 3% to 5% with the same/lower budget spend**
- Designed Media attribution with multi-touchpoint using **Hidden Markov model** and leverage the comparison study of Media planned cost and the actual cost **(Programmatic advertising and DTP marketing cost)**
- **Regression analysis** of Productivity, Effectivity, profit margin, Short-term and long-term ROI of different media channels based on the buying strategy and time series analysis **(Productivity goes from 16% to 23% with same/lower spending)**

➢ *Epsilon, Bangalore — Senior Data Programmer (Advanced Analytics), April 2017 –September 2019*
- Design data processing pipeline to migrate PII data of customers(B2C) from the client data source EDW and analyze their purchase and sales history using different **Inferential statistical methodologies** to do initial segmentation and assign promo-code and offers accordingly.
- Worked on Chest X-ray image classification problem to detect Tuberculosis (TB) pleural effusion (Client: American Heart Association) using Dense Convolution Neural Network (CNN - ResNet)
- **Net revenue Prediction:** Build a predictive model for net revenue of different products category of different clients based on only clicks on **Google Shopping ads** which also includes other purchased products in the same visit (with **cross-selling, up-selling**).
- **Social Media Analysis:** Worked for different FMCG companies. The responsibility was to understand the underlying consumer trends using **NLP** and **Deep Learning (RNN and LSTM)** algorithms. It has helped to get the surface insight from 'actual', unprompted consumer behavior via social data and has empowered markets to act smarter and faster to get to consumers first through data-backed brand communication & engagement, and strategically enable new product innovation.
- **Direct email Marketing:** Derived the churn rate of the customers of different clients and built models to able to identify/segment the customers using **Tree-based and regression algorithm** and **customized Neural network (POC)** and identify underlying KPIs to leverage the optimum solution to retain the customer **(Pilot- achieved average reduction of churn rate 1.2%)**

➢ *Exilant Technologies (Apple Inc.), Bangalore - Software Engineer (Analytics), April 2015 - March 2017*
- Apple Metro Mapping: Built data curation process as part of **CRISP-DM pipeline** to induct retail postal and store related data from retail-core to EDW-core and later to the **EDW Semantic (1k+ nodes with 6-7 Petabyte of data)** for reporting purpose by mapping the postal and store data to the order and item-level data **incorporating complex business logic using Teradata Procedure.**
- Engineered Apple Payment Gateway-related data and conducted **A/B test to the Global Business Intelligence core.**
- Apple Online Sales and Service: Data curation using the query-tuning and performance check and incorporating business logic, through Teradata stored procedure, python integration, and various customized APIs. Involved in User data management (UDM)and Data Quality Management (DQM) and process **automation.**

➢ *Navitus Controls & Equipment Pvt. Ltd, Kolkata - Junior Data Scientist, August 2013 – March 2015*
- Built data analytics processes to enhance technology services by NCEPL, to solve the limitations of an old and aging Electrical infrastructure.
- Analyzing relevant data of leading partners having different manufacturer units of monitoring devices, communication infrastructure providers and Analytical Software providers to design and configure end-to-end solutions in the field of "Condition Monitoring" of the Electrical Assets.
- Analyzing the data of intelligent and leading-edge technology solutions and adding value to customers' businesses(B2C) to move to a "Condition Based Maintenance Program" from an existing "Time Based Maintenance Program"

➢ **Mentorship Experience**

upGrad,Industry Expert Data Science Coach, Feb 2021 - Present
- Collaborating with academia to guide and mentor the AI researchers and Data Science professional

Skill Highlights
- **Traditional Data Science Methodology:** Machine Learning methodology, time series analysis, Statistics, Mathematics, Probabilistic graphical modeling
- **AI techniques:** Natural Language Processing (NLP), Computer Vision and other Deep Learning based modeling
- **Advanced AI modeling:** Reinforcement learning
- **Deep Learning Framework:** Tensorflow , Pytorch
- **Data Analytics programming language/tool:** Advanced Python, Advanced Excel
- **AutoML :** Pycaret,h20.ai
- **Database:** MySQL, Teradata, Oracle (SQL,PL/SQL),SQL Server
- **Scripting Language**: Linux/Unix (shell script), Python
- **Micro web framework:** Flask, FastAPI
- **ML model deployment/maintainability:** MLOps tools**,** AWS, Azure, Heroku (used Dockers and Kubernetes in ML Flow)
- **Generic Data Visualization Tools:** Power BI
- **Bigdata and Cloud Technologies:** Hadoop (HDFS), Microsoft - Azure, Amazon – AWS, Azure Databricks
- **Marketing Analytics Tools:** Datorama, Einstein (Salesforce), Digital Catalyst (BCG), Sensor (Gain Theory), Global Performance Suite, Google analytics, DCM, Shopalyst(E-commerce), Facebook business manager
- **Process/Methodologies**: CRISP-DM, KDD, Waterfall, Agile Methodology
- **Functional skills:** Building Data COE and Analytics Wing/Team, Program/Team Management

Certifications
- **"Sequence Models** "from deeplearning.ai
- **"AI Workflow: Enterprise Model Deployment"** from IBM
- **"Cryptocurrency and Blockchain"** from Wharton Online
- **"Practical Time Series Analysis"** from The State University of New York
- **"Practical Machine Learning"** from Stanford University (Online-2016)
- **"Computer Vision with Watson and OpenCV"** from IBM
- **"Industrial IoT on Google Cloud Platform** "from Google Cloud
- **"Introduction to Data Science in Python"** from The University of Michigan
- **"Datorama Admin – Champion"** from Salesforce
- **"Apache Spark Essential Training"** from Lynda.com.
- **"RDBMS Concepts and Oracle"** from IBM (Project: Designing of Library management system)
- **"Analyzing Bigdata with Hive"** from Lynda.com
- **"Excel Statistics Essential Training"** from Lynda.com
- **"German Language (intermediate course-1A)"** from Inlingua- Bangalore

Competitive Exam: All India Rank: 17373
State Rank: 577 in ALL INDIA ENGINEERING/ARCHITECTURE ENTRANCE EXAMINATION (AIEEE)-2009

Publications
➢ **Paper Title: "Performance Analysis of Discrete-Time Steady-State Kalman Estimator for Linear Dynamic Systems"** (Published at National Conference on Instrumentation and Control NATCONIC-2013)
https://www.researchgate.net/publication/301771725_NATCONIC_2013_Preview

➢ **Thesis Title:** "Contextual Topic Modeling Using Bert As an Embedding Layer" (Liverpool John Moores University, UNITED KINGDOM)

Education

➢ **Master's in Machine Learning and Artificial Intelligence (Thesis-based) Liverpool John Moore University, UK, June 2020 – January 2021**
Research Area – NLP, and Language model **(BERT, XLNET,GPT2, GPT3)**

➢ **PGD in Machine learning and Artificial Intelligence International Institute of Information Technology, Bangalore June 2019 – June 2020 (**Statistics and EDA, Advanced ML, NLP,Deep Learning, Reinforcement Learning, Probabilistic Graphical Models, ML model deployment methodologies)

➢ **B-Tech in Electronics & Communication Engineering Heritage Institute of Technology, Kolkata, India August 2009 – May 2013**

➢ **High School: WBBSE, (Math, Physics, Statistics), May 2009**

Personal Details
- **DOB:** 23rd February 1990 | **Pan Card:** APFPC8004E
- **Passport [Indian]:** U8873848 **| Languages known** English, German
- **Permanent Address:**71/6 BARUI PARA LANE, Kolkata -700035, WB