MD TAJRIYAAN CHOWDHURY

MACHINE LEARNING ENGINEER

: (+88) 01688354174, (+44) 07395650124

: tajriyaanchowdhury97@gmail.com

: House 13, Flat 8, Road 128, Dhaka -1212

: https://tajriyaan.website/

: https://www.linkedin.com/in/tajriyaan-chowdhury/

I am an experienced tech professional with excellent *industry-applied* problem-solving and leadership abilities. I enjoy *learning* and taking on various *roles* to apply my knowledge and *lead* individuals to *streamline* and *solve* challenges in the industry. Currently I am tackling *big data* challenges in the *agri-fintech* sector.

EDUCATION

University of Nottingham — September 2017 - June 2021

BSc Hons Computer Science with Artificial Intelligence — **Awards:** First Class, BCS Certified

University of Nottingham — July 2016 - May 2017

Foundation in Engineering

TECHNICAL

Programming Languages: HTML5, CSS, Python, C, JavaScript, R, jQuery, Embedded C, Node JS, MATLAB, Haskell.
Frameworks: Flask, Django, Pandas, Matplotlib, NumPy, Plotly, SciKit-Learn, Bootstrap, Docker
Tools: MS Office, Google Cloud Services Platform, GitHub, Google Maps API, MQTT, C-Panel, Power Query, Arduino, REST API, Figma
Database: MySQL, SQLite, Mongo DB, PostgreSQL

RELATED WORK

iFarmer Limited, Dhaka — September 2021 - Present
Machine Learning Engineer

KYC & Credit Risk Score
- Engineered a credit rating model based on 10,000 farmer profile, transactions, and KYC to help the firm and banks (Standard Chartered Bank, UCB, Brac Bank) rank and make informed loan decisions in 20 seconds using classification model (Random Forest).
- Applied data processing and exploratory data analysis techniques to investigate and gain insights from farmer purchase and sales activity and proposed relevant and reduced bias KYC fields for farmer profiling.

Connected Cow
- Automated real-time reporting dashboard (Google Sheets) and Finetuned Machine Learning application with data wrangling techniques (Rolling average, Euclidean distance) on big data to detect estrus of cows with 70% accuracy for Unsupervised Learning (Classification with Clustering Algorithm).
- Hosted Mosquitto Broker and Mongo DB on AWS EC2 server to store and monitor cow daily activities.
- Collaborated with Hardware Partner (Bondstein Technologies Ltd) to design an ergonomic and scalable IoT enabled cow collar.

Intelligent Soil Sensor
- Productionized soil sensing program (Flask, Docker) to predict NPK lab values and generate fertilizer advisory, improving crop yield and service efficiency from 20 mins to 5 mins using Supervised Learning (Linear Regression).
- Conducted hypothesis tests (z-test, t-test, an-nova Test, A/B Testing) to validate proof of concept.

Remote Sensing
- Developed software for geospatial analysts to remotely fetch and assess crop stress data in 30 seconds (nitrogen deficiency, moisture level, pest attack) using Google Earth Engine & EOS platform and AWS (S3 Bucket).

Oncosys International, Dhaka — March 2021 – August 2021
Developer & Business Strategist
- Increased global business revenue by 30% by building digital portfolio.
- Formulated and administered OKRs to existing operations and established new business of UK consumer electronics brand with product portfolio of 30 items.

Datasoft Manufacturing & Assembly Inc Limited, Dhaka — October 2020 – January 2021
Internet of Things Engineer

Grameenphone Smart Home
- Scripted REST API (Flask Framework) to link with Robi SMS Gateway, which increased device communication by 20%.
- Resolved program flow issues and bugs to ensure the seamless operation of deployed hardware and software

University of Nottingham, United Kingdom — October 2019 – October 2020
Software Developer

IRSYS – Irrigation Recommendation System
- Wireframed (Figma) and developed (HTML, Bootstrap, JavaScript) a real-time web dashboard to support irrigation.
- Implemented MQTT protocol and socket.IO (Node JS) for seamless data transmission between device and server connection.
- Optimized the system to produce recommendation results with 95% accuracy.

Datasoft Systems Limited, Dhaka — June 2019 - August 2019
IOT Developer

Bluetooth Low Energy (BLE) Technology Based Smart School
- Tested & Deployed Attendance Tracking system to boost classroom attendance by 30%.
- Improved proximity detection accuracy by 90% utilizing Zonal Classification concept (Trilateration Algorithm).

Vehicle Tracking using Global Positioning System (GPS)
- Built a web application to support real time vehicle monitoring.
- Computed algorithm to locate vehicles in real time using GPS technology and Google Maps API and minimized buffer to 2 seconds.

CFF (Crops for Future Research Center), Malaysia — October 2018 - May 2019
Project Manager
- Spearheaded development of NLP based search engine web application (HTML) following Agile Methodologies (Jira) to index and retrieve crop-related data in 0.5 seconds.
- Created Virtual Machine (Linux) utilizing Google Cloud Services Platform for data mining (Scrapy) and successfully recognized as a research tool for CFF.

EXTRACURRICULAR ACTIVITIES

University of Nottingham September 2016 – June 2019

Student Learning Community Forum
Enhanced student academic experience with open feedback sessions.

Student Ambassador (Faculty of Computer Science)
Guided & supported students with technical support and awareness campaigns.

University Basketball Team
Qualified among 100 candidates to compete in university leagues.

International Cultural Nights (Malaysia & United Kingdom)
Participated in group activities with international students in UK and Malaysia campus to encourage student engagement.

TEDX UON, Malaysia September 2018

Core organizer, Logistics & Operations Director
Acquired sole license for hosting the first TED TALK at the University of Nottingham Malaysia Campus and conducted event management of 20 speakers and 300 guests. Highlighted as an article on University official magazine, Ignite.

BELTA INTERNATIONAL CONFERENCE July 2014

Head Volunteer
Volunteered in a 4-day international conference in Dhaka, Bangladesh and conducted registration, booth management, event setup, meet and greet of international guests

PROJECTS

- Linear Regression to predict house prices – using Pandas, Matplotlib
- Credit Card Fraud Detection with Linear Classification – using Pandas, NumPy.
- KNN, Decision Trees, Support Vector Machines – using MATLAB, Pandas and NumPy.
- Refined Search Strategies to Minimize Training Errors using Neural Networks – using MATLAB.

ADDITIONAL INFORMATION

Languages: English, Bengali, Hindi, Urdu.

Hobbies: Fitness, Movies, Sports, Cooking, Acting, Stage, Public Speaking.

Fields of Interest: Web Development, Machine Learning, Internet of Things, Data Science.

Work Eligibility: Eligible to Work, will require sponsorship.

REFERENCES

Available on Request