SHREYA BANIK

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SUMMARY

- Skilled Machine Learning Engineer and Artificial Intelligence enthusiast with 2.5 years of experience in Application Development and Data Analysis.
- Proficient in utilizing Python frameworks, SQL databases and Cloud environments for machine learning applications.

EDUCATION

University Of New Haven, Connecticut, USA **May, 2025**
Master of Science in Data Science **3.6/4 GPA**

- Relevant Coursework: Data Science, Artificial Intelligence, Machine Learning, Statistics, Distributed and Scalable Data Engineering, Database Management System, Deep Learning, Natural Language Processing, Bayesian Data Analysis, Leadership & Entrepreneurism

Hooghly Engineering and Technology College, India **Aug, 2021**
Bachelor of Technology in Electronics and Communication Engineering **3.5/4 GPA**

- Relevant Coursework: C Programming, Data Structures, Object Oriented Programming & Java, Analog and Digital Communication, Wireless Communication and Radar Engineering, Digital Signal Processing, Wireless Communication, Digital Logic Design

WORK EXPERIENCE

Programmer Analyst, Cognizant Technology Solution, India | MySQL, MS-Excel, ServiceNow, Splunk, Git **Oct 2021 – Jul 2023**

- Conducted in-depth research on insurance data by utilizing Monthly Service Review (MSR) and analyzing Monthly Metrics.
- Implemented an automatic reconciliation tool by utilizing MySQL Workbench and MS-Excel for tracking 400K+ daily transactions from ServiceNow, resulting in a drop in resource efforts by 78%.
- Analyzed and documented policy and claims-related large datasets offering meaningful and complex insights to both technical and non-technical stakeholders.
- Applied SQL queries and data manipulation techniques to uncover key patterns, leading to a 30% improvement in reporting accuracy.
- Identified and reduced defects by 8X, showcasing effective problem-solving skills and process improvement.

Internship, CBNITS Pvt. Ltd., India | Angular, React-Native, TypeScript, MongoDB, UI/UX **Apr 2021 – Sep 2021**

- Developed a flexible and protected mobile application for Crypto-Currency using Angular framework and Typescript in React-Native environment that allows currency exchange and store-in-wallet.
- Teamed up with inter-departmental managers to resolve problems in the application by adding innovative changes in the product.
- Performed end-to-end research to inform data-driven decision-making processes to enhance overall project outcomes and introduced latest classes and methods in app-development to bring improved flexibility and functionality of the application by 82%.

PROJECTS

Snake-A-Bite Game Implementation Using Reinforcement Learning | Artificial Intelligence, Pytorch, Pygame, RL, NN

- Developed an AI agent capable of autonomously playing the Snake game by implementing reinforcement learning algorithms.
- Employed Pygame library for the game environment and Pytorch for implementing a suitable RL algorithm to train the agent for optimal decision making.
- Adjusted QTrainer for the neural network weights to improve Q-value predictions and plotted Visualization to track the improvement in training performance by checking on average score by time.

Uber Fare Prediction Cost Estimation in New York | ETL, Python, Flask, ML, PKL, UI/UX

- Trained the data model on a 1.6M parameter dataset and efficiently employed a Random Forest Regressor to split data for training/testing.
- Identified and managed outliers in critical features, making informed decisions on their removal or application of appropriate transformations.
- Optimized performance using metrics such as Mean Squared Error (MSE) and Root Mean Squared Error (RMSE) resulting in an 80% increase in training efficiency.

Predict Adult Income | Microsoft Azure, ML, Boosted Decision Trees, Web Service Deployment

- Led end-to-end development of an adult income prediction system, utilizing Microsoft Azure and Machine Learning concepts, achieving 94.4% accuracy.
- Performed data cleaning to handle null values, feature selection, and class imbalance via up-sampling, training two models for comparison.
- Achieved AUC of 0.986 in boosted decision tree model after hyperparameter tuning, published as a web service for inference.

Statistical Analysis on Accidental Drug Deaths in Connecticut | Python, EDA, Statistics, UI/UX

- Analyzed a dataset of 51.3K entries using Python key libraries (Numpy, Matplotlib, SciPy, Pandas, Seaborn) to uncover crucial insights into the alarming increase in accidental drug-related deaths in Connecticut (2012-2022).
- Applied exploratory data analysis, advanced statistical hypothesis testing and feature engineering to uncover the death rates upgrowth by drug toxicity.
- Created meaningful Visualizations using python libraries to uncover key-points and build a website to showcase the insights.

Heart Stroke Prediction model with R analysis | R-studio, Caret, ggplot2, GLM

- Spearheaded development of a Stroke Prediction Model with R programming and libraries (dplyr, tidyr, caret, ggplot, tidyverse etc.).
- Deployed the validated linear regression model for clinical use, enhancing decision-making in healthcare settings.
- Conducted comprehensive data analysis, preprocessing, and feature selection to achieve 94.62% predictive accuracy.

TECHNICAL SKILLS

Language: Python, R, Scala, Bash, JS, Html, Css, MATLAB, TypeScript, C++
Frameworks: React Native, Node-JS, AWS, Pytorch, Flask, Hadoop
Database: SQL, MYSQL, MONGODB, NoSQL, PostgreSQL
MS-Tools: Office, Word, Excel, Power BI
Tools: Git, Splunk, MySQL Server, Docker, Apache Spark, ETL (Shell, Airflow, Kafka), Jira
Python Libraries: NumPy, SumPy, Pandas, SciPy, SkLearn Matplotlib, Seaborn, Keras, TensorFlow, Cv2, OS, Pymc3
Cloud: AWS, Microsoft Azure

CERTIFICATIONS & LICENSES

- Coursera Certified Deep Learning Specialization – DeepLearning.AI
- Google Data Analytics Professional Certificate – Coursera Certified
- IBM Data Engineering Professional Certificate – Coursera Certified
- Basic to Advanced - SQL, Problem Solving using Python – Hackerrank Certified