Nimra Idris Siddiqui

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EXPERIENCE

AI/ML Intern | ElementOne, Piscataway, NJ **June 2023- Feb 2024**

- Designed and developed a personalized AI-powered chatbot resulting in a 38% increase in customer satisfaction by providing instant results, eliminating delays.
- Boosted customer engagement by 10%, tailoring services to specific ethnic and faith-related preferences, effectively addressing the unique needs of diverse customers.
- Implemented advanced Natural Language Processing (NLP) techniques, achieving a 25% improvement in chatbot accuracy and responsiveness.
- Conducted thorough testing, ensuring a 95% accuracy rate, prompt responsiveness, and precise data delivery for a seamless chatbot interaction.
- Collaborated with stakeholders and team members to align chatbot functionalities with unique customer management and data needs, fostering synergy and efficient workflow.

Graduate Assistant | Department of Computer Science, Youngstown, OH **Jan 2022 – Present**

- Initiated the project by collecting data, recognizing the absence of available resources online. Went beyond expectations by sourcing student data, modifying, and generating a substantial dataset crucial for project development.
- Developed "Dr. Lego," an innovative AI tutor, utilizing advanced deep learning algorithms to analyze and evaluate code. Resulted in a significant 30% reduction in SPIKE Prime coding errors and provided immediate student support. Leveraged the Ohio Supercomputer for efficient model training, ensuring optimal performance.
- Implemented a code quality scoring system to evaluate student work, fostering a positive coding culture and driving a 16% increase in student engagement and skill enhancement.
- Presented Dr. Lego's impactful results at prestigious conferences in Italy and Chicago, validating its real-time utility and significance beyond academic boundaries.
- Assisted in the Digital Circuit lab as a teaching assistant, overseeing projects with analog devices controlled through Keil software and providing guidance to 50+ students.
- Managed all operations and departmental software, including MATLAB, LogiISIM, and ModelSim.

Summer Internship | University of Malaysia. **June 2019 – July 2019**

- Applied innovative artificial jellyfish search algorithm to effectively eliminate lower-order harmonics in Cascaded H Bridge multilevel inverter.
- Achieved a notable 18% increase in inverter efficiency, specifically tailored for integration into Photovoltaic (PV) systems.
- I utilized MATLAB to develop an algorithm, reducing switching losses. The research, validated through simulations and experiments, resulted in a submitted paper highlighting its impact on inverter efficiency and renewable energy applications.

SKILLS/CERTIFICATION

Programming Languages: Python, R, Java, SQL, JavaScript (JS), React, SAS, C, C++, MATLAB
Tools/Frameworks: GitHub, Power BI, Spotfire, Tableau, Snowflake
Certifications: Post Graduate Program in Artificial Intelligence and Machine Learning, AWS Certified Cloud Practitioner from Udemy

EDUCATION

Youngstown State University
Master of Science, Computer Science **GPA: 4.0/4.0**
Aligarh Muslim University
Bachelor of Science, Electrical **GPA: 4.0/4.0**

PUBLICATION

- Artificial Jellyfish Search Algorithm-Based Selective Harmonic Elimination in a Cascaded H-Bridge Multilevel Inverter
- Performance Evaluation of Multilevel DC-AC Converter To Interface EV Battery For V2H Application
  IEEE North America Power Symposium Texas A & M

PROJECTS

Multiple Disease Prediction App

- Accomplished the development of a user-friendly and accurate app for predicting the risk of developing multiple diseases, making it accessible to users online.
- Collected extensive data from Kaggle to ensure accurate results, meticulously filtering and cleaning the data to train the model effectively.
- The app has garnered significant user engagement, with over **1000+ users utilizing its** features.
- Demonstrated impressive predictive accuracy:
  - Achieved 82% accuracy in predicting heart disease.
  - Attained 87% accuracy in predicting Parkinson's disease.
  - Secured 78% accuracy in predicting diabetes.

Business intelligence to optimize costs for a restaurant

- Collaborated with a cross-functional team to implement a Business Intelligence solution for a restaurant chain, resulting in a noteworthy 12% increase in profitability and cost reduction through comprehensive data analysis.
- Demonstrated effective teamwork by efficiently distributing tasks, taking proactive actions, maintaining regular communication, and conducting daily check-ins to ensure smooth progress. Additionally, examined and meticulously filtered/cleaned data, contributing to precise decision-making.

Breast Cancer Classification with Neural Network:

- Worked independently to develop a deep learning model for classifying breast cancer using mammogram images.
- Designed and implemented a convolutional neural network (CNN) architecture using Python and popular deep learning libraries like Keras and TensorFlow to classify mammogram images as benign or malignant.
- Trained and fine-tuned the CNN model using transfer learning techniques and hyperparameter tuning to achieve high accuracy and generalization.