IFECHUKWUDENI TEDDY OWEH

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Education
Tarleton State University, Stephenville TX, *Spring 2022 - Fall 2025*
Bachelor, Computer Science, Artificial Intelligence and Data Science, Honors**.**

Technical Skills

Full stack Software Development - ReactJS, Vuejs, NodeJS, PHP, React Native, TailwindCss. Machine Learning Modelling - TensorFlow, Sklearn, Pytorch. Data Exploratory and Analysis - Python Pandas, Powerbi, Matplotlib, Seaborn. API Development & Design - NodeJS, Python Flask., Cloud Computing, Networking and Operating System - Linux, AWS, Linode, Azure. Database Systems - Mongo DB, MySQL. Version Control - GIT. Containerization - Docker

Research & Work Experience

Tarleton State University, Stephenville TX
 Lead Student Researcher, (Electrical & Computer Science Department). 3/22 - Present

Hybrid Feature Selection for Machine Learning Models

- Trained models using various statical methods, cluster metrics and scalers, stored results and performed data analysis and visualization on the results to determine the optimum model that gave accurate results based on the classification report.
- Developed algorithm to efficiently train models that accurately useful features to use when training and developing machine learning models in order to get accurate results.
- Extensive research on statical methods, cluster metrics and scalers used in developing machine learning models.

Tarleton State University, Stephenville TX
Student Researcher, (Mathematics Department). 3/22 - Present

- Developed Python scripts for simulating the spread of disease in a network graph.
- Used my knowledge of Dynamic Systems Modelling to analyze data from the simulations of the spread of disease in a network graph. This included studying the relationships between the nodes and edges in the graph and analyzing the data to identify any trends or patterns in the spread of disease to optimize the model and make it more accurate.
- Worked with a team, on solving and creating methods for discovering disease susceptibility rate and recovery probability.

- Translated theoretical mathematics to pseudocode and developed algorithms to achieve predetermined functionalties.

Tarleton State University, Stephenville TX
Student Tutor, Grader, (Intro to Computer Science). 9/22 - 12/22

- Assisted the professor in explaining introductory to intermediate Python programming concepts thought in class to the students,
- Graded student labs.

Projects

NASA USLI Payload

Developed a payload system for capturing and rotating images using a Raspberry Pi camera and stepper motors and carrying out various image processing tasks based on the signal received.

• Utilized Python programming language and libraries such as OpenCV, NumPy, picamera, time, and RPi.GPIO.
• Implemented hardware engineering principles to connect and control stepper motors using the Raspberry Pi microcontroller.
• Used object-oriented programming concepts in the development of the Payload driver code.
• Demonstrated knowledge of image processing and manipulation using OpenCV.
• Utilized time and DateTime libraries to add timestamps to images and create timestamped file names to validate that the images were taken during the predetermine intervals.

Tarleton Rocket Team Website

Lead and developed the Tarleton Rocket Team Website. Used ReactJS frontend and component-based development, redux for statement management, mongodb as the database system and Nodejs to develop APIs to communicate back and forth from the database to the website.

[Tarleton Rocket Team Website](#)

Beardb

Developed and published a Python library, Beardb, a database system that implements AES encryption to securely store and manage JSON data. With Beardb, users can easily access, manage, and deploy their data remotely without worrying about unauthorized access. The system is designed to be user-friendly and easy to set up, making it suitable for users with limited technical experience

Skills Applied: Python • Distributed Systems • Algorithm Design • VueJS • Scss • Component Based Web Design.

[Website](#) • [Source Code](#) • [Python Package](#)

BeardbAPI

Developed a microservice that uses the Beardb database system to deploy and manage JSON databases remotely. The microservice provides API endpoints for accessing the data stored in these databases. These API endpoints can be accessed using HTTP POST requests and return data in the form of JSON objects. This allows users to easily access and manipulate the data and integrate the microservice with other systems and applications. Technical programming skills used include:

Skills Applied: Database management and integration • API development and management • HTTP protocol and request/response handling • JSON data formatting and parsing.

Cheat Model

Developed an NLP Text Categorization Model model using various algorithms and techniques to classify sentences as closely related to a student asking for answers in a group chat. The model utilized various libraries and tools for text preprocessing, model building and evaluation, and feature extraction, and was developed for a social network used by students with the same major to prevent student for asking for answers in groups. Developed and Designed an API system to allow integration of the Cheat Statement NLP Text Categorization Model into various applications

- Utilized NLP techniques such as tokenization, stopword removal, stemming, and lemmatization for text preprocessing
- Used pandas, NumPy, seaborn, matplotlib, and pickle for data manipulation and visualization
- Applied Logistic Regression, SGDClassifier, and MultinomialNB classifiers based on different mathematical algorithms
- Utilized sklearn's train_test_split, classification report, F1 score, accuracy score, confusion matrix, ROC curve, AUC, and ROC AUC score for model evaluation
- Implemented feature extraction techniques including bag of words representation and word embedding using TfidfVectorizer, CountVectorizer, and Word2Vec
- Saved the final model using pickle for future use

[Source Code](#)

Organizations

Honors College

Tarleton Computer Society, President 3/22 - Present

Student Government Association (SGA), Congressperson for College of Engineering 10/22 - Present

IEEE Tarleton Branch, Media Officer - 3/22 - 10/22

Tarleton Rocket Club, Media & PR Lead & Web Development Lead - 10/22 - Present

Student Research Association.

Maths Club.

Tarleton Ping Pong Club, President 10/22 - Present.

Awards

Dennis P. McCabe Student Endowment Scholarship
Joe R & Dr. Teresa Lozano Long Scholarship