github.com/dhanushbiligiri

Dhanush Biligiri N H

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Graduate Student with a passion for leveraging technologies to address societal issues, offering scalable and sustainable solutions. Equipped with robust leadership skills and resilience under pressure, I thrive independently and in team settings. Seeking a **CO-OP/Internship for Fall 2023/Spring 2024**.

EDUCATION

Michigan Technological University, Houghton, MI
M.S Data Science, GPA - 3.75/4.0 — Expected May '24

New Horizon College of Engineering, Bangalore, India
B.E Information Science and Engineering, GPA - 3.62/4.0 — Aug '18 - Aug '22

EXPERIENCE

Graduate Research Assistant - Michigan Technological University, Houghton, MI — May '23 - Present

Cross-View Image Geolocalization, Vision Transformer in Hyperspectral Image Classification

- Worked on the initial research for cross-view Image geolocalization modules to understand the theory and practical use of the same
- Currently working on a survey paper on the topic of Vision Transformers used in Hyperspectral Image Classification

Graduate Assistant - Michigan Technological University, Houghton, MI — Sep '23 - Present

- Responsible for collecting data, conducting statistical analysis, and generating comprehensive reports for projects

Graduate Research Assistant - Michigan Technological University, Houghton, MI — May '23 - Aug '23

Hidden Curriculum - Department of Computer Science

- Worked on the research called 'Hidden Curriculum' which is a learning module helping students to understand basics of concepts before they have to encounter tasks in classes
- Developed a canvas module called 'College of Computing Resource Hub' with several topics, including Linux hierarchy, version control systems, and canvas navigation

Software Engineer Intern - Aeronautical Development Establishment (ADE), DRDO — Feb '21 - Apr '21

'Real-time Analysis of Flight and ground systems parameters and report generations'

- Created a module in the existing software to collect, analyze, and generate reports on the data collected from the unmanned aerial vehicle (UAV)
- Created a User Interface for the system officer to work efficiently from the ground control system (GCS)
- Modified the parameters module according to the flight officer and system officer's selection

SKILLS

Languages - Python, R, SQL, C, C++, CSS, HTML

Software - Jupyter, Hadoop, Spark, Tableau, Rstudio, PyCharm, Power BI, SPSS, VS Code, React Native, MS Office, Git

Fields - Data Visualization, Data mining, Machine Learning, Deep Learning, Applied Statistics, Data Analytics, NLP, Predictive modeling, Time series Analysis

Certifications - Introduction to Quantum Computing (2020-2021), Python programming, Introduction to Machine Learning

PROJECT EXPERIENCE

Time series forecasting for mortality — Feb '23 - Apr '23

- Analyzed the CDC's 11-year National Vital Statistics dataset, focusing on the top seven causes of death to discern mortality trends to understand the pattern and prevalence of specific causes
- Transformed the data for regression and utilized the XGboost model to categorize mortality based on specific features. This process enabled the identification of key mortality trends enhancing the understanding of the factors
- Achieved a 92% classification accuracy while classifying a cause of death to its relevant features

Comparison of Classification Models — Feb '23 - Apr '23

- Classified emails using multiple models, emphasizing accuracy enhancement through optimal feature selection
- Evaluated model performances post-feature selection, identifying top performers such as Naive Bayes, Decision Tree, Random Forest, AdaBoost, KNN, and SVM
- Generated a series of visualizations to represent model comparisons, ultimately finding that Random Forest with Recursive Feature Elimination (RFE) yielded the highest accuracy of 97%

Statistical analysis of Telco Churn data — Feb '23 - Apr '23

- Executed a thorough exploratory data analysis (EDA) on Telco churn, visualizing data with histograms and correlation plots, revealing nuanced relationships between variables, enabling better predictions and strategic decision-making
- Through these visualizations, I was able to identify distribution trends and ascertain the strength and direction of relationships between variables, providing a foundation for further analytical endeavors and decision-making
- Identified key churn influencers in the telecom sector by applying ANOVA and Dunn's test on dataset variables

Pneumonia Detection Using Deep Learning — Jan '22 - July '22

- Processed and refined X-ray images using advanced techniques, preparing them for deep learning analysis
- Utilized the CNN algorithm alongside OpenCV, Keras, and TensorFlow to accurately detect pneumonic lungs from X-ray data to enhance the precision of pneumonia diagnosis which ensures reliable interpretation of the data
- Achieved a 96% classification accuracy while classifying the X-ray images to the state of the lungs

Spam Classifier using Naive Bayes Algorithm — Aug '19 - Dec '20

- Oversaw comprehensive data processes from importation to segmentation, ensuring data quality for model training
- Implemented the Naive Bayes algorithm, achieving a commendable classification accuracy of 96%

INTERESTS: Basketball, Taekwondo, Gaming, Traveling, Music