

BIMAL SAGAR H K

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ABOUT ME

Passionate and dedicated student with a strong interest in Artificial Intelligence. Eager to contribute to the AI revolution by leveraging my knowledge and skills to develop innovative solutions. Committed to staying updated with the latest advancements in AI and applying them to real-world problems.

Interests : Algorithms, Machine Learning, Deep Learning, Computer Vision, NLP

EDUCATION

| Degree | Institute/Board | Year |
|---|---|-------------|
| Bachelor of Technology in Mechanical Engineering | Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Chennai, India. (An Institute of National Importance, under Ministry of Education, Government of India.) | 2020 - 2024 |
| Senior Secondary school of education - 12 th | Expert Pre-University College, Mangalore | 2019 - 2020 |
| Secondary school of education - 10 th | Sharadha Residential School, Udupi | 2017-2018 |

EXPERIENCE

- Data Analyst Intern** May 2023 - Aug 2023
Centre for Industry 4.0 Lab Pune, India
 - Developed and implemented fleet management systems for logistics operations.
 - Utilized 3D modeling to optimize loading efficiency.
 - Defined and integrated parameters, including maximum weight loaded and maximum packages loaded, for precise cargo management.
 - Implemented handling protocols for fragile items to prevent damage during transport.
 - Conducted quality inspections on water pump assembly line.
 - Employed cobot (collaborative robot) for image capture.
 - Utilized computer vision to ensure completeness of parts in the assembly.
 - Technologies Used: Python . Machine Learning . Statistical Analysis . Computer Vision . IoT

PROJECTS

- Realtime Job Listing Analysis** Oct 2023 - Present
Natural Language Processing Project Repository
 - This project involves aiding job seekers with essential FAQ's such as top skills required, salary range and opportunity rates.
 - Employed *Selenium* and *BeautifulSoup* for scraping job listings.
 - Utilizing NLP to tokenize and analyze extracted data.
- Stock Price Forecasting after Splits Using Stacked LSTM** Feb 2023 - March 2023
Time Series, Deep Learning Project Repository
 - This project involves preprocessing time series data which is confronted with stock splits, causing data discontinuity.
 - Succesfully predicted prices through rescaling and implementing Stacked LSTM Model.
- RNN using NumPy** June 2023 - July 2023
Deep Learning Project Repository
 - This project aims to develop a custom Vanilla RNN (Recurrent Neural Network) from scratch using only *Python* and *NumPy*.
- Hand-written digit recognition using Self-optimized CNN** July 2023 - Aug 2023
Computer Vision Project Repository
 - This project aims to develop own algorithm to perform GridSearch instead of conventional GridSearchCV function of TensorFlow.
- Hand Gesture recognition of Traffic officer** May 2023 - June 2023
Computer Vision Project Repository
 - Developed a custom dataset using LabelImg and expanded the size through data augmentation techniques.
 - Employed a TensorFlow ResNet model to detect hand gestures and recognize traffic officer signals, enhancing safety management.
- Twitter Sentiment Analysis** Jan 2023 - Feb 2023
Natural Language Processing Project Repository
 - Using Kaggle Sentiment140 dataset, comprising sentiment-labeled tweets conducted data preprocessing using Python regex. Employed word cloud visualizations to highlight word frequency and employed TF-IDF for text vectorization.
 - Designed and evaluated three distinct ML models and as dataset is not skewed, accuracy was the chosen metric. The models effectively predicts sentiment for input comments.

For more details on my project works kindly visit my GitHub profile: <https://github.com/Bsagar07>

SKILLS

- **Developer Tools:** Visual Studio Code, Google Cloud Platform, Jupyter Notebook, Anaconda, Microsoft SQL Server, Fusion 360
- **Programming Language:** Python, C, Java
- **Databases:** MySQL
- **Operating Systems:** Windows, Linux
- **Presentation tools:** LaTeX, Microsoft Office tools, Tableau
- **Soft skills:** Critical Problem Solving, Systems Thinking, Teamwork, Leadership.

POSITIONS OF RESPONSIBILITY

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| • Football Captain, Sports Affairs Council, IIITDM Kancheepuram | <i>March 2023 - Present</i> |
| • Joint Secretary - Football, Sports Affairs - Students Affairs Council, IIITDM Kancheepuram | <i>Jun 2022 - Jun 2023</i> |
| • Member, Art Club, IIITDM Kancheepuram | <i>Jun 2021 - Apr 2022</i> |

LICENCES & CERTIFICATIONS

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|---|-------------|
| • Deep Learning - IIT Ropar, Prof. Mitesh M Khapra - NPTEL | <i>2023</i> |
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