MR. GAURAV SHRIPAD UNTAWALE

B.Tech. - Computer Science & Engineering - MIT - WPU

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BRIEF SUMMARY

I am Gaurav S. Untawale, a highly motivated individual pursuing a Bachelor of Technology degree in Computer Science and Engineering from MIT World Peace University. My passion lies in mathematics, computer programming, and the exciting fields of machine learning and natural language processing. I have demonstrated my skills in front-end web and Backend Developement, creating websites using HTML5, Bootstrap4, ReactJS and PHP, Django, MERN stack. I am currently working on AWS certifications and will be applying for the Practitioner certificate in upcoming month. I have actively contributed to development of brain-computer interfaces, exploring the effects of meditation and different Sanskrit verses on the human brain and consiousness. With a strong foundation in programming languages like C++, Python, and Javascript, along with expertise in machine learning and deep learning, I am ready to take on new challenges and make a positive impact in the technology industry.

KEY EXPERTISE

C | C++ | Python | Django | JavaScript | MATLAB | Data structures and alogrithms | Pandas | NumPy | TensorFlow | PyTorch | Scikit-Learn | Keras | Matplotlib | Scrapy | BeautifulSoup | MySQL | MongoDB | ReactJS | DevOps | PHP | AWS

EDUCATION

Dr. Vishwanath Karad MIT World Peace University (MIT-WPU) 2020 - 2024
B.Tech. - Computer Science & Engineering - MIT - WPU | CGPA: **8.20** / **10.00**

Rao Junior College Of Science, Nagpur 2020
12th | HSEB | Percentage: **87.08** / **100.00**

Somalwar High School & Junior College, Nikalas Branch, Nagpur 2018
10th | MSBSHSE | Percentage: **98.00** / **100.00**

PROJECTS

Next Word Prediction using Deep Learning 07 Jun, 2023 - 29 Jun, 2023
Team Size: 1

Key Skills: Python | Deep learning | Artificial Intelligence | Neural Networks | tensorflow | Regular Expressions | Machine Learning

Project Link: https://github.com/Gaurav-1032201414/Next-word-prediction-using-Deep-Learning.git

Next-word prediction using deep learning is a Natural Language Processing (NLP) task that aims to identify the most likely word to follow a given string of words. Recurrent neural networks (RNNs) like LSTM and GRU are examples of deep learning models that are good at capturing sequential dependencies and making precise predictions. An embedding layer, recurrent layers, and dense layers are frequently present in model architectures. During training, model parameters are optimized using a sizable corpus of text data and the right loss function. Once trained, the model uses its architecture to process input before producing a probability distribution that it may use to predict the next word. Importing libraries, preparing the dataset, establishing the model architecture, training the model, and word prediction using a seed text are all steps in the code implementation process.

ChatGPT-3 With Voice command Capabilities 16 Feb, 2023 - 20 May, 2023
Mentor: Prof. Aparna Kamble | **Team Size:** 5

Key Skills: Python | Django | Machine Learning | API | Artificial Intelligence | Attention Module | UX | Data Analysis

Project Link: https://drive.google.com/drive/folders/1f9HGAiHyKaPlak06nsSo2UbXhUPh41It?usp=share_link

The project was based on providing a voice command capability to the well known chatGPT3 bot AI free of cost. The major focus was on 2 main functionalities:
1. Updating ChatGPT3 info uptill 2023 on Geopolitics
2. Providing text to speech and speech to text functionalities for better ease

Emotions and their corresponding Frequency Generation using BCI 26 Jan, 2023 - 17 May, 2023
Mentor: Prof. Yogesh Kulkarni | **Team Size:** 1

Key Skills: Python | MATLAB | IBM SPSS Statistics | BCI | BiDirectional BCI | Signal Processing | Fast Fourier Transform

Project Link: https://drive.google.com/drive/folders/1X1x5YEyvhAI8XU9h4sRLGB8kN1dX3qDr?usp=share_link

The project aims to investigate the neural mechanisms of emotions using Brain-Computer Interfaces (BCIs) and Bidirectional Brain-Computer Interfaces (BBCIs). Specifically, the project will focus on generating corresponding frequencies of emotions through EEG signal recognition, utilizing techniques such as Fast Fourier Transform and Machine Learning. The project's ultimate goal is to achieve a deeper understanding of the human brain and develop potential therapeutic interventions for emotional disorders. The project will draw upon relevant research papers in the field, including those on BCIs, EEG signal processing, and emotions.

Effect of Sanskrit verse on Human Brain using Brain Computer Interface
Mentor: Abhishek Chunawala | **Team Size:** 4

Key Skills: Machine Learning | MATLAB | Data Analytics | Signal Processing | Python | Fast Fourior Transform

Project Link: https://drive.google.com/drive/folders/1fPAFtAZcCEbhoCokEEPMxbQlW2lN7Ow0?usp=share_link

This project aims to study the impact of Sanskrit verses on the human brain using BCIs. The project will measure brain activity using EEG signals while participants listen to recitations of Sanskrit verses and translations. The goal is to determine that listening to Sanskrit verses can positively affect the brain and this effect can be measured using BCIs.

PUBLICATIONS / RESEARCH / WHITE PAPERS

Urinary Incontinence using Machine Learning

30 Mar, 2022

Conference paper | International Conference On Scientific Computing In Innovation (ICSCI 2022) | **No. of Authors:** 5

Key Skills:

Machine Learning | Python | Arduino UNO | Raspberry Pi | IBM SPSS Statistics | Data Analysis | Internet of Things | Electrical Impedence Tomography

Urinary Incontinence is predominent among old-age and disabled individuals. Many therapy and management modalities have been developed but these techniques are manual in nature and need a substantial amount of time and effort. The proposed model focuses on automation of detection of possibility of urine sensation depending upon the daily life cycle of the user/patient. This helps in dealing with the sudden urination problems in public with a prior indication of the situation and helps in better and faster measures to get carried out.

ACHIEVEMENTS

- Have secured 1,00,000Rs. of fund for a Medical field based project from the MIT World Peace University.

ASSESSMENTS / CERTIFICATIONS

Python Certificate

It covers topics like Scalar Types, Operators and Control Flow, Strings, Collections and Iteration, Modularity, Objects and Types and Classes

Problem Solving Certificate

Key Skills: Data Structure algorithm | python

It covers basic topics of Data Structures (such as Arrays, Strings) and Algorithms (such as Sorting and Searching).

CO-CURRICULAR ACTIVITIES

- I have participated in several different hackethons conducted by GeeksForGeeks and Google.

EXTRA CURRICULAR ACTIVITIES

- I have participated in 21km Marathons
- I enjoy writing blogs regarding topics like brains and emotions, movie revies, book reviews, travelling and many more.
- I enjoy going on Treks and Hikes with my Trekking group "□□□□□□□□ □□□□□□□□ □□□□□"(Gadkille Truth-seeking Campaign)

PERSONAL INTERESTS / HOBBIES

- Music
- Ukulele
- Cycling
- Swimming
- Trekking

WEB LINKS

- Github - https://github.com/Gaurav-1032201414
- Other - https://auth.geeksforgeeks.org/user/untawaleg5uol/practice
- Other - https://www.hackerrank.com/untawalegaurav20
- Personal - https://somthinbrainymachines.blogspot.com/2023/06/next-word-prediction-using-deep.html

PERSONAL DETAILS

Gender: Male
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