Disha Parmar

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ABOUT ME

I'm Disha Parmar, deeply passionate about AI and well-versed in Python, Sci-kit, and advanced deep learning techniques. I dedicated to collaborative efforts and driving business growth, I aspire to apply my tech skills for meaningful impact, especially within the medical domain. Recognized for my meticulous and proactive approach, I bring a unique blend of precision and curiosity to projects, fostering a dynamic and innovative work and study atmosphere.

PATENT PUBLICATION

[7 Jun 2024]

NAVIGATIONAL AID DEVICE FOR VISUALLY IMPAIRED INDIVIDUALS

Disclosed is a navigational aid device for visually impaired individuals comprising: a camera configured for real-time capture and analysis of surrounding imagery using object detection algorithms to identify and classify obstacles, including but not limited to, people, animals, and objects; an audio feedback mechanism to provide auditory signals indicating the presence and location of detected obstacles relative to the user's path; a vibration alert system integrated with ultrasonic sensors for notifying the user of low-height obstacles; an audio guidance system with customizable volume and language settings, offering directional cues based on detected obstacles and user orientation; and a connectivity module for linking with a GPS-enabled mobile application, allowing real-time location tracking and access to device settings, software updates, and user manuals.

WORK EXPERIENCE

Research Intern - Artificial Intelligence

TSS Consultancy Pvt Ltd [4 Jan 2023 – 21 Jun 2024]

City: Rajkot | **Country:** India | **Website:** https://www.trackwizz.com/

- Conducted behavioral and sentiment analysis through web scraping and harvesting on various projects.
- Implemented Natural Language Processing techniques for data analysis and interpretation.
- Executed newspaper summarization to enhance content readability for the company.
- Verified user profile authenticity by consolidating data from multiple sources.
- Automated SEBI document analysis, extracting valuable information for the company's database.
- Utilized tools such as Generative AI, Hugging Face models, OpenCV, YOLO, and Beautiful Soup.
- Trained and customized models for specific use cases to optimize workflow efficiency

Engineering research scientist

Vodafone Idea Foundation [Jul 2022 – Sep 2022]

City: Rajkot | **Country:** India | **Website:** https://www.vodafone.com/

- As a part of team I have developed a brain tumor detection model using deep learning techniques.
- Achieved an impressive 95% accuracy in identifying brain tumors from MRI images.
- Implemented advanced neural network architectures to enhance detection capabilities.
- Utilized deep learning algorithms for robust and accurate analysis of medical imaging data.
- Contributed to the field of medical diagnostics by creating an effective and reliable detection model.

EDUCATION AND TRAINING

Bachelor of Technology(B.Tech) , Computer Engineering With Specialization in Artificial Intelligence

Marwadi University [Aug 2021 – May 2024]

City: Rajkot | **Country:** India | **Website:** https://www.marwadiuniversity.ac.in/ | **Final grade:** 8.88 CGPA | **Thesis:** Sequence to Symphony: Decoding Protein Functions with Neural Networks

- Gain foundational knowledge in AI, covering intelligent agents, search, knowledge representation, inference, logic, and learning.
- Learn key algorithms including Classification Algorithms, Neural Networks, Image Processing, Deep Learning, and NLP Models.
- Develop creativity in problem-solving through research in AI, focusing on addressing scientific and technological challenges.
- Acquire understanding in robotics within the AI context.
- Enhance mathematical skills for effective implementation and optimization of AI algorithms.

Diploma Computer Engineering

Atmiya University [Jul 2018 – Jun 2021]

City: Rajkot | **Country:** India | **Website:** https://atmiyauni.ac.in/facultylist/diploma-computer-engineering/447 | **Final grade:** 9.90 CGPA | **Thesis:** Webcall: Web Based Video Conferencing

- Specialized in computer hardware and software design, focusing on embedded systems, network administration, mobile computing, data administration, testing, operations, and service systems.
- Proficient in software engineering with expertise in programming languages such as C, C++, Java, and .NET technologies.
- Skilled in Android development, Node.js framework, and database management systems, including SQL.
- Acquired in-depth knowledge of hardware subjects, encompassing operating systems, data structures, network management systems, and computer maintenance and troubleshooting.

10th Standard

Matu Shree L.G Dholakiya [2018]

Website: https://dholakiyaschools.org/webportal | **Final grade:** 99.52 PR

Mathemetics, English, Social Science, Science, Sanskrit, Gujarati

DIGITAL SKILLS

Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access / IDE: Visual Studio, Pycharm, Jupyter Notebook / Tensorflow, Keras, Pytorch, sklearn / Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation / programming: Python, MATLAB and SQL / Machine Learing / Frameworks & Libraries: OpenCV, Sci-kit learn, NumPy, Pandas, SciPy, Matplotlib. / GIT AND GITHUB

HONOURS AND AWARDS

[9 Dec 2023] Marwadi University
1.Best Paper Award
Published Research paper on topic of "Freezing of Gait Prognostication in Parkinson's Disease"

2nd International Conference on Advancements in Smart Computing & Information Security (ASICS 2023)

[Oct 2022] Finalist
2.VOIS Innovation Hackathon I got appreciation award from gujarat government for making solution for visually impaired popele by making smart blind stick .

3. State Level Hackathon 2022 Appreciation Award I was recognized with an appreciation award from the Gujarat government for developing a solution aimed at aiding visually impaired individuals through the creation of a smart blind stick.

PROJECTS

[Current]

1. Sequence to Symphony: Decoding Protein Functions with Neural Networks This project delves into protein functionality using deep learning techniques. Leveraging genome sequencing data, Convolutional Neural Networks (CNNs) analyze amino acid sequences, while Recurrent Neural Networks (RNNs) capture temporal dependencies. The goal is to enhance my understanding of protein functions and their intricate biological roles.

[1 Jul 2023 – 9 Nov 2023]

2. Freezing of Gait Prognostication in Parkinson's Disease The project employs cutting-edge techniques, utilizing a comprehensive dataset with 3D accelerometer data to apply advanced machine learning models. The primary focus is on objectively quantifying and classifying freezing of gait (FOG) episodes into distinct types, namely Start Hesitation, Turn, and Walking. These techniques aim to shed light on the intricate world of FOG, contributing to a deeper understanding and potentially paving the way for more effective treatments for individuals with Parkinson's disease.

[Sep 2023]

3. Smart Blind Stick using Object Detection & OpenCV It is project to helps blind people to navigate in environment to detect object and obstacles. it can equipped with sensors and computer vision system works with machine learning algorithms and give feedback in audio form.

[Jul 2022 – Sep 2022]

4. Brain Tumor Detection using Deep Learning Methods This project focuses on using Deep Learning to detect and classify brain tumors in MRI images, aiming to streamline medical diagnosis. Leveraging state-of-the-art methods, a pretrained CNN architecture is employed, utilizing labeled datasets such as ImageNet and Kaggle for enhanced classification accuracy. The project's primary goal is not only to identify the presence of a brain tumor but also to categorize its specific type.

Link: https://github.com/Disha-Parmar011/brain-tumor-detection

[Apr 2022]

5. Facial Recognition System using Siamese Network A Facial Recognition System employs Siamese Networks, a specialized neural network architecture for one-shot learning. These networks enable efficient face verification and identification by creating embeddings for each face, enhancing accuracy in recognizing identities across diverse images and videos.

[Nov 2021]

6. Webcall : Web based Video Conferencing WebApp For my diploma thesis, I crafted a video conferencing app using Node.js, leveraging web development skills, algorithms, and APIs. The project showcased my practical application of academic knowledge, emphasizing user-centric design, and integrating third-party APIs for enhanced functionality and stability in real-time communication.

Link: https://github.com/Disha-Parmar011/Web-call

[10 Jul 2024 – Current]

7. Enhancing Melanoma Detection: AI-Powered Approaches and Future Research Directions This paper explores key research areas essential for advancing AI-powered melanoma detection: enhancing algorithm accuracy and generalizability, improving data acquisition and management, and integrating AI with clinical practice. By addressing these challenges, AI can revolutionize melanoma diagnosis, improving patient outcomes and access to care.

CERTIFICATIONS

[14 Aug 2022]
1. Artificial Intelligence and Machine Learning - Advanced

Vodaphone Idea

During my internship, I sought to enhance my skills and knowledge, leading me to successfully complete an advanced course in Artificial Intelligence and Machine Learning.

[Jul 2022]
2. Introduction to Image Processing

MathWorks
This course helped me to develop essential for mastering image analysis techniques in MATLAB® and Image Processing Toolbox™, imparting crucial skills in import/export, enhancement, segmentation, feature extraction, and more.

[25 Jun 2022]
3. Data Science Math Skill

Duke University

The course improved my mathematical skills, particularly in areas such as statistics, linear algebra, calculus, and probability theory, essential for data analysis and machine learning.

[Jun 2022]
4. MATLAB Onramp

Through this course I learnt the basics of using MATLAB, including performing calculations with commands, importing data from external sources, and visualizing data using plotting functions.

[May 2022]
5. Machine Learning with Python

IBM
In this course, I've explored ML algorithms like logistic regression, SVMs, and multiclass prediction, and implemented KNN, decision trees, and regression trees in Python, evaluating their performance with metrics like accuracy and F1 score.

[May 2022]
6. Web app with Python and Flask

Coursera
In this 2-hour course, learn web app development with Python and Flask, covering Flask basics, templates, culminating in building my first web app.

[23 Feb 2022]
7. MTA-Introduction to Programming Using Python- Certified 2021

Microsoft
Achieving an 85 out of 100 in the "Introduction to Programming Using Python" certification showcases competence in writing Python code, understanding data types, and logically solving problems with Python.

[29 Apr 2024]
GOETHE-ZERTIFIKAT A1 START DEUTSCH 1

[9 Jul 2024]

LANGUAGE SKILLS

Mother tongue(s): Gujarati

Other language(s):

English
LISTENING B2 **READING** B2 **WRITING** B2
SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Hindi
LISTENING C2 **READING** C2 **WRITING** C1
SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C1

German
LISTENING A2 **READING** A2 **WRITING** A2
SPOKEN PRODUCTION A2 **SPOKEN INTERACTION** A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

VOLUNTEERING

[Current] India
Robin Hood Army
- Conducted learning sessions for young students lacking educational opportunities, promoting access to education.
- Spearheaded women awareness drives in slum areas, addressing crucial issues and empowering local communities.
- Played a key role in organizing food and cloth distribution drives, actively contributing to donor engagement.