Mohammad Faizan Siddiqui

Junior
Bachelor of Technology
Dept. Of Electrical & Electronics Engineering

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Education

Graduation: Rajiv Gandhi Institute of Petroleum Technology, B. Tech in Electronics Engineering, 2022-2026, CGPA: 9.04 (4th Semester)
Intermediate: St.Francis' College, 2022 - 95.5%
Matriculation: St.Francis' College, 2020 - 90%

Achievements

- Currently **Top 5 % in Department** .
- Nominee of **McM scholarship awarded by the institute to top 10% Academic Achievers**.
- **Cleared JEE Advanced** 2022.
- Secured **Gold Medal** in **ISC Examination for 100% in Mathematics** 2022.

Experience

1. World Robotics Championship-Technoxian
July 2023

· Participated in the Maze Solver Event.
· 3D Printed a bot containing micro-controller Ultrasonic Sensors and High-Torque and High-Precision Motors Implemented a PID control algorithm for the maze traversal.
· Finished Under Top 10 in the event.

2.Technical Program Committee at CVMI 2024
July 2024

· Contributed to the review and assessment of further submitted papers to the conferences.
· Carefully analyzed and reproduced the presented results along with technical and analytical assessment with what was presented in the paper.
· Compared the submitted papers with SOA papers to judge the novelty of the work.

Conferences

· Attended **3**rd IEEE International Conference on Computer Vision and Machine Intelligence (IEEE CVMI).

Key Projects

1. Microstrip Patch Antenna Design for 2.4GHz Bandwidth Using ANSYS HFSS *Self | July 2024 - October 2024*

· Designed and simulated a microstrip antenna for the 5 GHz band using ANSYS HFSS.
· Achieved gain of 2.9dB and a bandwidth of 100MHz with return loss (S11) below -10 dB.
· Optimized antenna dimensions and impedance matching for best performance.
· Generated gain plots and analyzed the radiation pattern for design verification.

2.Cross Modality Mapping Using Deep Learning
Self | June 2024 - August 2024

· Preprocessed two modalities for imaging the Brain:- MRI and CT.
· Introduced a loss function specific for the structural consistency of the generated images.
· Used a CycleGan along with this loss function for the mapping from these prepared datasets.

3.Classification Of NeuroDegenrative Diseases
Power Electronics Lab | Dr. Ankur Pandey | May 2023 - July 2023

· Made a Pre-processing Pipeline for EEG data for Alzheimer's Disease and Frontotemporal Dementia Patients.
· Implemented Classical and Deep Feature infused matrices with a based Model for classification.
· Achieved a High degree of accuracy then further modified the process flow and methodology to extend the work for a publication.

4. Building Integrated Photovoltaic (BIPV) Potential Assessment *Smart India Hackathon 2024 | Team Alcheringa | September 2023 - October 2023*

· Developed a parametric model to assess solar irradiation and material efficiency for BIPV potential using real-time Sun data APIs.
· Implemented dynamic simulations in Unity with C for solar gain calculations and photorealistic sunlight rendering.
· Built an interactive WebGL platform for scalable 3D visualization of urban solar energy potential using LOD-1 city models.

Publications

- Paper submitted to 19th EAI International Conference on Body Area Networks Titled "A Low-Overhead CNN-Based Approach for Sleep Posture Recognition with Device-Free Monitoring using UWB Radar" Publication; Authors: Braj Jha, Mohammad Faizan Siddiqui, Dr. Ankur Pandey

- Published Paper Titled "A Low Cost CNN-Based Method for Differential Diagnosis of Alzheimer's and Frontotemporal Dementia" Publication; Authors: Braj Jha, Mohammad Faizan Siddiqui, Dr. Ankur Pandey at Attended 3rd IEEE International Conference on Computer Vision and Machine Intelligence (IEEE CVMI).

Skills

- C/C++, Java, Python, MS OFFICE & MATLAB.
- MicroController Programming and making Embedded Systems.
- Verilog, VHDL, SystemVerilog, HTML, CSS, JavaScript.
- Blender, Unity, AUTOCAD, ANSYS HFSS.
- Teaching, PR, Management, Machine Learning,3D Printing, Video Editing & Editorial.

POR's

- Undergraduate TA (FEE)
- Chairperson IEEE SB RGIPT
- Teaching Volunteer Gyanarpan Project Amethi
- Tinkering Executive Science and Technical Council