

Deepa Tilwani

VISITING RESEARCH INTERN @ AIISC

1112 Greene St, 5th Floor, Artificial Intelligence Institute, The University of South Carolina, Columbia, SC, 29208 USA.

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Summary

Poses diverse involvement in analyzing, evaluating, preprocessing, and improving current models for neurological signals (EEG/ECG). Proficient in collaborating with high-performing teams to build artificial intelligence/machine learning solutions for providing suitable and optimal solutions to health specialists. Open for collaboration, research work in the field of data science, machine learning or artificial intelligence. Interested in developing a better problem-solving strategy for challenging problems, and learning new technologies and tools if the need arises.

Research Interests

Machine Learning, Deep Learning, Brain Computer Interface, Neuroscience, Artificial Intelligence for Health Care.

Work Experience

Visiting Research Intern

Columbia, SC, USA.

ARTIFICIAL INTELLIGENCE INSTITUTE, UNIVERSITY OF SOUTH CAROLINA

September 2021 - Present

- Adopting, utilizing and developing new approaches, methodologies for Lesion Mapping and classification in Aphasia.
- Actively participating in projects with research group at institute.
- Building and implementing architecture road-maps for next generation Artificial Intelligence solutions for collaborators.

Remote Research Intern

Remote - Columbia, SC, USA.

ARTIFICIAL INTELLIGENCE INSTITUTE, UNIVERSITY OF SOUTH CAROLINA

October 2020 - August 2021

- Planning and executing challenging technical problems.
- Organizing, analysing, pre-processing of ECG signals, using signal processing techniques.
- Designing pipeline for Autism likelihood in infants using Machine Learning.

Graduate Teaching Assistant

Jaipur, Rajasthan, India

THE LNM INSTITUTE OF INFORMATION TECHNOLOGY

August 2019 - May 2021

- Assisted and evaluated undergraduate students in Computer Network, Data Structure, Database Management System and Advance Programming lab work.

Data Science Intern

Remote

THE SPARKS FOUNDATION

August 2020 - September 2020

- Pre-Processing of the data set provided using numpy and pandas libraries in python.
- Extracting valuable information from data set.
- Worked on creating models using supervised machine learning techniques.

Education

The LNM Institute of Information Technology

Jaipur, Rajasthan, India

M.TECH. IN COMPUTER SCIENCE AND ENGINEERING

2019 - Pursuing

- CGPA : 7.42

Govt. Women Engineering College (GWECA)

Ajmer, Rajasthan, India

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING

2014 - 2018

- Percentage : 67.4

Queen Mary's Girls School

Ajmer, Rajasthan, India

INTERMEDIATE - 12TH

2013-2014

- Percentage : 68.4

Queen Mary's Girls School

Ajmer, Rajasthan, India

HIGH SCHOOL - 10TH

2011-2012

- CGPA : 7.2

Honors & Awards

INTERNATIONAL

Sept 2020 **2nd Prize**, LINZ Ars Festival -BR41N.IO HACKATHON

Linz

July 2020 **2nd Prize**, BR41N.IO: Brain-Computer Interface Designers Hackathon

Austria

DOMESTIC

- 2016 **1st Place**, Presentation on AR and VR Technology
- 2015 **3rd Place**, Toast to Code- C Language
- 2012 **Silver Prize**, National Science Olympiad

GWECA

GWECA

Ajmer

Projects

Lesion mapping and Classification in Aphasia using Structural MRI's.

Columbia,SC,USA

VISITING RESEARCH INTERN

January 2022 - Present

- Analyzing damages caused by Aphasia in left hemisphere of brain using T2 weighted images.

Predicting likelihood of Autism in infants using ECG's.

Remote- AI Institute University of
South Carolina

RESEARCH INTERN

Oct. 2020 - Present

- Analyzed ECG data-set of infants for early detection of Autism.
- Pre-processing, feature extraction and developing models using Machine Learning and Deep Learning algorithms.

Data Analysis of ECoG Data

Remote-Linz

HACKATHON PROJECT

Sept. 2020

- Analyzing an ECoG data-set having the data of rock paper scissor hand movements or hand-poses from an epilepsy person in order to optimize pre-processing, feature extraction and classification algorithms. Compared machine learning algorithms results with state-of-the-art algorithms.

Motor Imagery EEG BCI Data Analysis

Remote- Austria

BR41N.IO BRAIN COMPUTER INTERFACE DESIGNERS HACKATHON PROJECT

July. 2020

- Analyzed a motor imagery BCI data-set from a chronic stroke patient in order to optimize pre-processing, feature extraction and classification algorithms. Compared results with state-of-the-art algorithms.

Freelancer Website

GWECA

MAJOR B.TECH PROJECT

Dec 2017- April 2018

- Website for final year project submission.
- Where user or freelancers registers themselves to search or request needed jobs of their interest.
- Any project or job can also be added by the companies who are looking for respective candidates who can willingly complete the projects provided.

Publications

INTERNATIONAL CONFERENCE ON DATA DRIVEN COMPUTING and IOT (DDCIOT-2021)

20-21 MARCH,2021

- Porwal S., Patel C.K., Tilwani D., Bansal S.K. (2021) A Comparative Study and Tool to Early Predict Diabetes Using Various Machine and Deep Learning Based Techniques. In: Mathur R., Gupta C.P., Katewa V., Jat D.S., Yadav N. (eds) Emerging Trends in Data Driven Computing and Communications. Studies in Autonomic, Data-driven and Industrial Computing. Springer, Singapore. https://doi.org/10.1007/978-981-16-3915-9_29

Skills

Back-end MySQL

Front-end HTML5,CSS

Tools and Technologies C, Python, LaTeX, Machine Learning, Matlab, Digital Signal Processing

Languages Hindi, English

Certifications and Training's

Data Analytics Virtual Training Program

Quantium

VIRTUAL TRAINING

Sept. 2020

- Analysed data of a daily store.

Fundamentals of Scalable Data Science

IBM

CERTIFICATION

July. 2020

- Introductory Course on Data Science by IBM

Python for Everybody Specialization

Coursera

CERTIFICATION

April. 2020

- Specialization Course for Python.

Indian Space and Research Organization

Jodhpur, Rajasthan, India

SUMMER TRAINING PROGRAM- WEB DEVELOPER

Jun. 2017 - July. 2017

- Implemented back end using MySql which is communicating with client, along with two other team members who wrote the php logic's and designed front end.

Government Women Engineering College

Ajmer, Rajasthan, India

FEST WEBSITE DEVELOPER

Jan. 2016 - Mar. 2016

- Designed website with other team members for college technical fest with a separate login portal for students and organizers.