Mansi Singh

Final year | Electrical Engineering | IIT Jodhpur
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EDUCATION

UNDERGRADUATE
B.Tech in Electrical Engineering
IIT Jodhpur | Expected 2021
Cum. GPA: 8.62/10.0

SENIOR SECONDARY SCHOOL
Central Academy, Kota | 2017
Percentage: 88.2/100

SECONDARY SCHOOL
Sophia Secondary School | 2015
CGPA: 10.0/10.0

COURSEWORK

RELEVANT COURSES
Machine Learning
Digital Image Processing
Introduction to Neo4j 4.0.0
Applied Graph Algorithms
Computer Programming
Data Structures
Digital Logic and Design
Microprocessors & Microcontrollers

MATHEMATICS
Complex Analysis and Differential Equation
Probability, Statistics and Random Processes
Linear Algebra and Calculus

SKILLS

PROGRAMMING
• C, C++ • Java • Python
• MATLAB • HDL

SOFTWARES
• Neo4j Community - Browser
• Postman
• Ansoft ANSYS HFSS
• Ansoft Designer SV • Vivado

OTHERS
• Graph API • Latex • Spring Boot

POR

CAPTAIN
Volleyball Girls Team | 2018

STUDENT GUIDE
Counselling Service | 2018

WORK EXPERIENCE

ENVESTNET YODLEE, BANGALORE | SUMMER INTERN
May'20 - July'20 | WFH | PROJECT TRAINEE

Module - 1
- Basics of Graph databases and Algorithms on Neo4j Graph database platform
- Implemented CRUD operations and created relations on databases (Yelp database and Merchant - Ticker relational graph)

Module - 2
- Built an API to create single source of truth for all unified metadata, facilitating access and delivery (Spring Boot Maven Project)
- Tested API using postman against various requests

PROJECTS

BLIND DEHAZING USING INTERNAL PATCH RECURRENCE
Jan'20 – July'20 | Guide - Dr. Rajendra Nagar | IIT Jodhpur
- Analyzed degraded hazy images and their properties which could be used to recover haze-free clean image
- Exploiting deviations from non ideal imaging conditions to extract unknown haze parameters- shared Airlight (A), Transmission map (t-map)
- Recovering haze free image by eliminating derived haze parameters

BLIND SIGNAL DIGITAL MODULATION RECOGNITION THROUGH CLUSTERING OF CONSTELLATION SIGNATURE
July'19 – Aug'19 | Guide - Dr. Sandeep Yadav | IIT Jodhpur
- Analyzed constellation structure from blind signal on the basis of density, considering Carrier Frequency Offset and symbol rate to be estimated a priori
- Derived properties of obtained density grids and matched with ideal constellation structures of different Modulation schemes (PSK, BPSK, QPSK, 8PSK and 16-QAM)
- Assigned modulation scheme on the basis of closest similarity index

MAIL SPAM FILTER
July'19 – Aug'19 | Self Project
- Followed three steps methodology which are Preprocessing, normalization and classification of mail content as spam or not
- Used Support Vector Machine (SVM) to train the classifier

STUDY OF IMPEDANCE TRANSFORMER IN MICRO-STRIP LINE TECHNOLOGY
Jan'19 – May'19 | Guide - Dr. Soumava Mukherjee | IIT Jodhpur
- Analyzed several configurations of micro-strip line-based Impedance Transformer and matched load-source impedance using Ansys High Frequency Structural Simulator (HFSS) and Ansoft Designer SV
- Validated existing paper against theoretical results and determined limitations

EXTRACURRICULAR

- Worked as **Assistant Head** in Cultural Events, Ignus'19
- Volunteered for National Workshop on Intelligent Multimedia Interfaces, IIT Jodhpur
- Participated in Ansys HFSS Workshop for EM simulations, IIT Jodhpur
- Participated in Qaudcopter Workshop, IIT Jodhpur
- Represented IIT Jodhpur Volleyball team in 52nd, 53rd and 54th Inter IIT Sports Meet
- Member at Music Club (Vocalist), Cultural and Literary Society