



NEERAJ JOSHI



ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	M.Tech in Instrument Technology	Indian Institute of Technology Delhi	8.625
2020	Bachelor of Technology(ME)	College of Technology, Pantnagar	7.872
2014	Central Board of Secondary Education	Beersheba Sr. Sec. School	83.2
2012	Central Board of Secondary Education	Beersheba Sr. Sec. School	9.2

IIT DELHI THESIS

Designing and machine learning enhancement of a low-cost optical seismometer for detecting seismic activities

Supervisor: Professor Manish Kumar

Description: Analyzing laser speckle dynamics for vibration in a low-cost Raspberry Pi system

Phase 1 : Vibration and seismic wave recognition method by using spatial filtering and deep learning algorithms

Phase 2 : Prototype testing for identifying UAV (drones) using machine learning models on seismic and acoustic data

SCHOLASTIC ACHIEVEMENTS

- **Selected in SCOPE22 an initiative of OPC and Foundation for Innovation and Technology Transfer(FITT) IIT Delhi**
 - Awarded with the fellowship & grant for project and guidance by FITT on entrepreneurship and product development
- **Scored 98.60 percentile in Graduate Aptitude Test in Engineering in Mechanical Engineering (GATE 2021)**

PROJECTS

- **A compact optical seismometer (SCOPE22 guided under OPC and FITT IIT Delhi)** (June 2022 - Present)
 - Development and demonstration of an innovative, high resolution, compact optical(laser) seismometer aimed at improving the real-time monitoring for regions with high telluric hazards (earthquakes, volcanoes, landslides, tsunamis) and defense applications
- **Fully responsive Flipkart Clone by using MERN Stack Technologies:** (Mar 2022 - July 2022)
 - Client-side (Frontend): Used React.js, Material-UI framework(for CSS implementation), and Redux (for handling states)
 - Server-side(Backend): Used Node.js and server made using Express.js
 - Database: Cloud MongoDB and Mongoose library (to connect the MongoDB to the Node.js and Express.js)
 - Set up the payment method using the dummy Paytm payments gateway.
- **Real-time chat web application using Node.js and socket.io:** (April 2022)
 - Developed and Designed a real-time web application for multiple users to do chat
 - Tool/Technologies used : HTML, CSS, VS Code, Node.js, JavaScript and socket.io.
- **Machine Learning model for predicting house prices given a set of features** (Prof. Manish Kumar) (May 2022)
 - 4 Different learning regressors(Linear regression, Random forest, Gradient Boosting, & XgBoost) were tested on the model
 - Achieved best prediction performance using Random Forest and worst using the Linear Regression
- **Fully responsive portfolio website using HTML, CSS, JavaScript, and Bootstrap 5** (Self Project)

TECHNICAL SKILLS

- **Programming Languages :** C++ || C || Python || JavaScript || SQL
- **Data Science Skills :** EDA || Machine Learning || Statistics || Data Visualization || Data Analytics
- **Web Technologies:** HTML || CSS || MERN Stack || React.js || Next.js || Tailwind CSS || Bootstrap
- **Miscellaneous :** MS Office || GitHub || MySQL || MongoDB || ANACONDA || Jupyter Notebook
- >Completed the course on "**Data Structures**" authorized by UC San Diego and offered through Coursera
- >Completed "**The Web Developer Bootcamp 2022**" and "**The MERN Full-stack Guide**" from Udemy
- >Completed the course on "**Introduction to Cloud Computing**" authorized by IBM and offered through Coursera

INDUSTRIAL TRAINING

- **4 weeks training at Bharat Heavy Electrical Ltd, Haridwar**(Heavy Electrical Equipment Plant (**HEEP**))(June 2019 - July 2019)
- Study of steam turbine manufacturing and understanding of the methodology of Power Generation and its transportation

POSITIONS OF RESPONSIBILITY

- **Central PG Coordinator, OCS IIT Delhi:** (April 2022 - Present)
 - Looking after the company pitching and student-company interaction activities along with other Coordinators
- **Mess Secretary, GBPUA&T Pantnagar:** (Aug 2018 - June 2020)
 - Served as mess secretary for two consecutive years and member of the university food committee

EXTRA CURRICULAR ACTIVITIES

- Volunteer at Office of career services (OCS) IIT Delhi (Oct 2021 - April 2022)



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IIT COURSE

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M.Tech in Instrument Technology	Indian Institute of Technology Delhi	8.625

COURSES DONE

Electro. Components & Circuits, Optical Components & Basic In., Precision Measurements Systems, Selected Topics In Instrumentation-ii, Sensors And Transducers, Display Devices & Technology, Electronic Tech. For Signal Conditioning & Interfa, Instrument Design And Simulations, Laser Based Instrumentation, Selected Topics In Instrumentation-i, Instrument Technology Lab 1, Instrument Technology Laboratory-ii

POSITIONS OF RESPONSIBILITY

- PG Coordinator, OCS, Others (May, 2022 - June, 2023)