

Navneet Singh

Third Year Undergraduate
Major in Earth Sciences

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ACADEMIC QUALIFICATIONS

Year	Degree	Institute	CPI/%
2020-2024(Expected)	B.S.	Indian Institute of Technology, Kanpur	7.6/10
2019	Class XII (ICSE)	Saint Fidelis College, Lucknow	93.25%
2017	Class X (ICSE)	Saint Fidelis College, Lucknow	96.40%

KEY PROJECTS

- **Silicon Labs' Social Entrepreneurship Challenge**
InterIIT Tech Meet 10.0 | IITKGP 📅(Feb'22 - Mar'22)
 - Developed an IOT-based non-invasive **automated health monitoring system** that acquires **6 vitals** from 4 sensors
 - Worked on a **5-pointer risk score prediction algorithm** to develop an **Early warning system** and generate an alert
 - Integrated **Unsupervised Anomaly Detection ML algorithm** to reduce data abnormalities due to sensor malfunction
 - Designed business model for real-world success of the product and won **Silver Medal** among **23** participating IITs
- **Flight Price Prediction** 🌐(Jun'22)
Course Project, IME672 | Prof. Faiz Hamid, IME
 - Developed an algorithm in Python which predicts the price of flight between two locations based on given attributes
 - Tested the dataset on various Machine Learning algorithms including **Random Forest Regressor, LASSO Regression, Ridge Regressor, Bayesian Ridge Regressor** and **Artificial Neural Network**, and comparing the **Root Mean Square Errors**
- **Sunscape Green Energy Project** (May'20 - Present)
Supervised By : Prof. Bharat Lohani | IIT Kanpur
 - Working on a **Flutter** based application for integrating a Solar Research model. Currently being tested by volunteers
 - The app captures **azimuth** and **elevation** bind pictures of a location and sends them to the backend through **web sockets**
 - A matrix of binary colors (white for sunlight and black for no sunlight) is received and is used for computing the **Solar potential** and **sunlight availability** of that particular location
 - It has applications in installations of **Solar Panels** and for other purposes by **farmers** and commercial builders
- **SPO Career Portal** 🌐(May'20 - Jul'20)
Under : Programming Club, IIT Kanpur
 - Worked in a team to develop a **unified** portal for the IIT Kanpur students for displaying all the various **off-campus internship**
 - Used **ReactJS** for developing the frontend, **Django** for devising the Backend and **axios** for integration of the both
- **Art Generation with Neural Style Transfer** 🌐(Jul'22)
Coursera, CNN,Self Project
 - Implemented the **Neural Style Transfer** algorithm to generate **novel artistic images**
 - Defined the **Style Cost Function** and the **Content Cost Function** for Neural Style Transfer

TECHNICAL SKILLS

- **Programming Language** : C++, Python, C, JavaScript, Dart, JAVA, \LaTeX
- **Libraries** : Pandas, Keras, Tensorflow, scikit-learn, OpenCV, Numpy, Matplotlib, Seaborn
- **Deep Learning** : Deep Neural Networks, RNNs and LSTM, GloVe, ResNets
- **Frameworks and Utilities** : ReactJs, Flutter, Django, Bash, Git, Arduino IDE, Android Studio IDE, Meshlab

RELEVANT COURSEWORK

Machine Learning	Data Structures and Algorithms	Image Processing
Fundamentals of Computing	Probability & Statistics	Deep Learning*
Real Analysis & Multivariate Calculus	Linear Algebra & ODE	Data Mining

HONOURS & AWARDS

- **Silver Medal(InterIIT Tech Meet 10.0)**, High preparation Social Entrepreneurship Challenge by Silicon Labs.
- Secured a rank of **186** in Codechef March Lunchtime 2021 among 6.6k+ participant
- Achieved a maximum rating of **1763** in **codechef**
- Awarded Merit Certificate for **Top 5** Sectional Fabrication Projects in **Manufacturing Arts-I** Course
- Qualified **Google Codejam 2021** with a global rank of **2209** among 37000+ participants
- Secured a personal best rank of **1594** in Google Kickstart 2021 among 19000+ participants

WORK EXPERIENCE

- **React Developer** (Dec'21 - Feb'22)
AIsence Technologies Pvt. Ltd.
 - Worked in a team of three to make a **proprietary business communication** platform used by firms for communication
 - App contains many **IRC-style** features, including persistent chat rooms organized by topic, private groups, and direct chats
 - Used ReactJS and TypeScript for frontend, Firabase for backend and database storage and Redux for State management.
- **Undergraduate Researcher** (May'22 - July'22)
Supervised By : Prof. Bharat Lohani | SURGE'22
 - Familiarized with representation of **LiDAR** data through **Point Clouds** (MLS etc.)
 - Generated 3D models of Kerala using its MLS point cloud data and generated simulated point cloud data out of it
 - Currently working on testing the accuracies of actual versus simulated datasets on various **CNN** algorithms like **PointCNN, PointNet, Semantic-Segmentation**
 - Also pondering on scope of generating new simulated data using the actual dataset available using **Deep Learning**

POSITIONS OF RESPONSIBILITY

- **Head, Web & App** (Jun'22 - Present)
Antaragni'22 | IIT Kanpur
 - Managed a total of **8 websites** and **portals** of Antaragni through a team of **9 web organizers**
 - Volunteered to to **update** the codebase from **AngularJs** to **ReactJs**, due to its light-weightedness and ease of accessibility
 - Mentored the team of **Web & App oraganizers** in learning **HTML, CSS, JavaScript, ReactJs** and **Flutter**
- **Secretary, Robotics Club, IIT Kanpur** (Aug'21 - Jul'22)
 - Organized Workshops in collaboration with NTU, Singapore, Participated in Techfest & revamped club website
- **Academic Mentor, Counselling Service** (Since Sept '21)
 - Personally mentored **66** students to resolve and clear concepts in **Fundamentals of Computing(ESC101)** course
- **Secretary, Web Division, IIT Kanpur** (Jun'21 - Jun'22)
 - Maintained the websites of Web Division in a team of 9

* : Coursera