

Piyush Senwar

Junior Undergraduate
Department of Civil Engineering

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI / %
2018 - 2022 (exp.)	B.Tech	Indian Institute of Technology, Kanpur	8.3/10.0
2018	CBSE - XII	Delhi Public School, Jodhpur	97.4 %
2016	CBSE - X	Delhi Public School, Jodhpur	10.0/10.0

Technical Skills

- **Programming Languages:** C++, C, Python, HTML (basic), \LaTeX (basic)
- **Softwares, Tools and Libraries:** Git, Pandas, NumPy, Scikit-Learn, SciPy Matplotlib, Seaborn, Autodesk Inventor, MS-Excel

Key Academic Projects

- **University Admission Prediction** July'20 - July'20
Coursera Guided Project Github
 - Used various tools in python for **Regression** Analysis to predict the chance of admission in a university on multiple features
 - Compared the performance of various Statistical and Machine Learning algorithms like **Multiple Linear Regression, Polynomial Regression, K-Nearest Neighbours, Decision Trees** and **Random Forest** using **R^2 score** as an evaluation metric
 - Achieved a best R^2 score of **0.85** for **Multiple-linear Regression** indicating linearity of most of the features with the chance
- **Prediction of Crisis Using House Prices** June'20 - June'20
Self Project Github
 - Used Python Libraries like **NumPy, Pandas, SciPy** and **Matplotlib** for data cleaning, data visualization and studying distributions
 - Found **correlation matrix** and **scatter plots** through seaborn pair plots to analyze the most correlated variables
 - Worked with SciPy modules **scipy.stats** and **ttest_ind**, to test **hypothesis** for crisis using the given dataset
- **3-Legged Jumping Robot** June'19 - July'19
Robotics Summer Project Robotics Club, IIT Kanpur
 - Built a robust 3-legged robot capable of hopping and jumping in any direction coordinating with a team of 6 members at first developing a functional prototype by properly analyzing the **models** possible through different readings
 - Used **Autodesk Inventor** to design the basic framework, tried **Matlab** and **MSC Adams** for simulation and **Arduino** to program

Relevant Coursework

(A* - Excellent Performance, A - Very Good Performance)

- **Algorithms and Mathematics**
 - Fundamentals of Computing
 - Data Structures*
 - Algorithmic Toolbox*
 - Introduction to Economics-A
 - Applied Probability and Statistics - A*
 - Linear Algebra and ODE
 - Partial Differential Equations
- **Data Science and Machine Learning**
 - Introduction to Data Science in Python*
 - Probability theory, Statistics and Exploratory Data Analysis*
 - Data Analysis with Python (IBM)*

(*Coursera)

Positions Of Responsibility

Sports

Captain, Institute Hockey Team (2020 - Present)	<ul style="list-style-type: none">• Entrusted to be in charge for the post of Institute Hockey Team at the end of my 2nd year itself for exhibiting excellent performances and leadership skills• Responsible for enhancement of hockey culture in the institute by attracting and nurturing the juniors• Responsible to lead the team for inter/intra college tournaments including Inter IIT Sports meet.
Secretary, Institute Hockey Team (2019 - 2020)	<ul style="list-style-type: none">• Coordinated with Games and Sports Council, IIT Kanpur for smooth conduction of hockey games held throughout the year including the organisation of workshops for attracting fresh talents• Represented the institute in Inter IIT Sports Meet, 2019 held in IIT Kharagpur during the tenure

Management

Student Guide, Counselling Service	<ul style="list-style-type: none">• Mentored 6 freshmen students to acclimatize to campus environment and to ease up their transition• Coordinated with the Counselling Service in smooth organisation of the Orientation Programme 2019 for an incoming batch of 900+ freshers.
Senior Executive Events, Udghosh'19	<ul style="list-style-type: none">• Ensured smooth conduct of the sporting events comprising of more than 2000+ participants during the tournament by coordinating with the heads, the managers and guiding the junior executives

Scholastic Achievements

- Secured an All India Rank of 7198 among the **1.2 million** candidates in Joint Entrance Examination Mains 2018
- Secured an All India Rank of 7317 among the **200k** candidates in Joint Entrance Examination Advanced 2018
- Secured an Olympiad rank of **523** in International Informatics Olympiad, SilverZone Foundation 2014

Extra-Curricular Activities

- Part of **Silver** winning Institute Hockey team in **Udghosh'19**, the annual sports festival of IIT Kanpur
- Represented Institute in **Spardha'19**, the annual Sports festival of IIT BHU and **Inferno'19**, the inter pool college sports tournament
- Selected in **top 10** amongst **60+** students to be a part of **Squash** family in the first year for Compulsory Physical Activity