

# Achyut Kumar Verma

Pre Final Year Undergraduate  
Department of Chemical Engineering

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## Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
July'17 - Present	B.Tech	Indian Institute of Technology, Kanpur	7.2/10
2016	JAC(XII)	Mrs. KMPM Inter College, Jamshedpur	82.4%
2014	JAC(X)	Saraswati Vidya Mandir, Jamshedpur	85.6%

## Scholastic Achievements

- Ranked in National Top 5% (among 1.6 lakh shortlisted candidates) in IIT-JEE Advanced 2017.
- Ranked in National Top 2% (among 1.2 million candidates) in JEE Mains 2017.

## Key Projects

- TMDB Box Office Prediction** (Mar'19- Jul'19)  
Supervisor: Prof. Faiz Hamid, Dept. of Industrial and Management Engineering IIT Kanpur
  - Predicted overall worldwide box office revenue using metadata on over 7,000 past films from The Movie Database (TMDB).
  - Preprocessed the data using Data Cleaning, Integration & Transformation of variables by carrying out Correlation & statistical analysis on more than 3 thousand data points.
  - Employed various regression techniques namely **linear regression**, **random forest**, **KNN Regressor**, **Neural Network**.
  - The **Gradient Boost Regressor** Model (using Engineered Features) achieved the best accuracy with RMSL error of 2.27*\*All the above mentioned steps were performed using Python.*
- Heat Exchanger Design** (May'19- Jul'19)  
SimuTech Club, IIT Kanpur
  - Simulated the different type of Heat Exchanger using **MATLAB** software.
  - Optimized the heat exchange output while minimizing the overall cost.
  - Analysed all the results for both parallel and counter flow heat exchanger.
- River Surface Cleaner** (Aug'18- Nov'18)  
Supervisor: Prof. Arvind Kumar, Dept. of Mechanical Engineering IIT Kanpur
  - Designed a water surface cleaning, floating machine in Autodesk Fusion 360.
  - Implemented the design using various manufacturing processes such as Milling, Lathing, Drilling, Welding, etc. to make a working model (in a team of 5).
- Flying Bird Model** (Jan'19- Apr'19)  
Supervisor: Prof. Shobit Omar, Dept. of Material Science IIT Kanpur
  - Designed a flying bird model in Autodesk Fusion 360.
  - Implemented the design using various manufacturing processes such as Casting, Welding, Brazing, etc. to make a working model (in a team of 5).

## Work Experience

- Summer Of Code**, sponsored by Nutanix and UPSIDC (May'19-Jul'19)  
Full Stack Developer IIT Kanpur
  - Created a web based platform for communication between teachers and parents for guidance of their wards.
  - Parents receive ward's absent notifications along with attendance details, marks and other important circulars directly from the class teacher instantaneously.
  - Used **Ionic** framework to create app and deployed database on **firebase**.

## Technical Skills

- Languages:** C, C++, HTML, CSS, Python(basic)
- Software and Utilities:** Git, Visual Studio, L<sup>A</sup>T<sub>E</sub>X, MATLAB, OCTAVE, Jupyter Notebook

## Positions of Responsibility

- Company Coordinator** (Aug'18-Apr'19)  
Student Placement Office IIT Kanpur
  - Coordinated with a 4-tier students placement team of the campus to ensure a smooth conduct of the company placement procedures.
  - Managed logistics of shortlisting tests, interviews for the recruiting process of companies like Tower Research, Microsoft, Flipkart etc.
- Student Nominee, Humanities & Social Sciences Department** (Feb'19-Ongoing)  
Departmental Under Graduate Committee IIT Kanpur

- Represented student interests of the academic disciplines of **Economics, Sociology, Psychology, Art**, etc. in the committee.
- Acted as a link between students and administration and also handled problems faced by students in their academic programmes.
- **Academic Mentor** (May'18-Apr'19)  
*Counselling Service Team* IIT Kanpur
  - Mentored a group of freshmen in the compulsory **Chemistry** course, and taught in classes at institute and hostel levels.

## Relevant Courses

Maths and Computing	Chemical Engineering
Data Mining and Knowledge Discovery	Fluid Mechanics and Rate Processes
Machine Learning, Coursera, Stanford university*	Thermodynamics
Probability and Statistics	Chemical Process Industries
Linear algebra and Differential Equations	Heat Transfer*
Data Structure and Algorithms*	Mass Transfer* <span style="float: right;">*Ongoing</span>

## Extra-Curricular Activities

- Achieved 9th rank in a group of 350 boys in Sixth India Open Yoga Championship, 2010.
- Successfully organised the Fifth International Day of Yoga, 2019 (in a team of 20) at IIT Kanpur.
- Enthusiast in Boxing, Swimming, Skating, Hockey, Volleyball & Yoga.