

RAKESH RANJAN | 17CH30023

CHEMICAL ENGG.(M.Tech Dual 5Y)



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2022	M.TECH Dual Degree 5Y	IIT Kharagpur	8.64 / 10
2017	CBSE Class XII (AISSCE)	Digdarshan Secondary School, Patna	93%
2015	CBSE Class X(AISSE)	Keshav Sarswati Vidya Mandir,Patna	10 / 10

COMPETITION/CONFERENCE

Inter Hall Chemquest | IIT Kharagpur | Secured Silver February 2019

- Designed efficient pumping system at the dock and at the receiving end of the plant.
- Designed system to transport the raw material to the plant with minimal head loss and with minimum power requirement.
- Calculated all head losses during the transportation of di-ethylene glycol from the dock to the plant.
- Designed the system to remove residual DEG in the pipeline by propelling suitable substance through it.

Inter Hall Data Analytics IIT Kharagpur | Secured Bronze February 2019

- Predicted network congestion type for the given data of cellular tower level activity achieving 80.7% test accuracy.
- Employed XGBoost, Neural Network, Random Forest, and SVM along with feature engineering to improve accuracy.
- Interpreted and analyzed the result of the built model to suggest mitigative measures to prevent the congestion.
- Performed hyperparameter tunning using grid search and Bayesian optimisation followed by k -fold cross validation.

PROJECTS

Study of Atmospheric data to predict the climatic pattern of a place.

Guide: Professor Arun Chakraborty, CORAL, IIT Kharagpur August'20-Present

• Used Fuzzy Clustering -Based Ensemble approach to predicting Indian Monsoon.

AWARDS AND ACHIEVEMENTS

- Cleared National Talent Search Examination(NTSE) stage 1,std 10 (2015).
- Won a Bronze Medal in Inter Hall Chem Quest Competition by designing efficient waste disposal system.
- Completed Programming Foundations with JavaScript, HTML and CSS with 95% marks on coursera.
- Joint Entrance Examination (Advanced 2017): Ranked in top 3% of the students.
- Joint Entrance Examination (Mains 2017):Ranked in top 0.6% of the students.

SKILLS AND EXPERTISE

- Programming Languages: C,C++,R,Python(Libraries:Pandas,Numpy,Keras,TensorFlow),Octave
- Softwares and Tools:Solidworks, MS Office , Power-Point, Ms-Excel, Tableau

COURSEWORK INFORMATION

- Programming Courses:Programming and Data Structure | Algorithm and Data Structure | Machine Learning | Deep Learning
- Mathematics Courses: Probability and Statistics | Transform Calculas | Numerical Solution of Partial Differential Equations
- Miscellaneous Courses: Heat Transfer | Mass Transfer | Fluid Mechanics | Thermodynamics | Basics Economics | Basic Electronics

POSITIONS OF RESPONSIBILITY

- Organising member of Robotics Workshop in Kolkata, West-Bengal.
- Former Chemquest Captain of Azad Hall of Residence.

EXTRA CURRICULAR ACTIVITIES

- Worked as a volunteer in NSS IIT Kharagpur and was committed to the welfare of underprivileged children and was a member of gold winning unit of NSS winter Camp.
- Participated in Bronze-winning English Drama Team of Azad Hall of Residence in Social and Cultural General Championship 2018.
- Volunteered in Khoj 2018, an annual treasure hunt competition conducted by Azad Hall of Residence.
- Represented Azad Hall in Inter-Hall Hockey 2019.
- Part of the Silver winning illumination team of Azad Hall of Residence in General Championship 2019.