



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2020	M.TECH Dual Degree 5Y	IIT Kharagpur	7.54 / 10
2015	Secondary School Examination	Shiv Jyoti Convent (CBSE)	87.4%
2013	Senior School Certificate	Ramakrishna Vivekananda Vidyapeeth (CBSE)	10 / 10

SKILLS AND EXPERTISE

- **Softwares:** MATLAB, SAS Enterprise Miner, ARENA, Unity3D, MySQL, CPLEX Studio, Google-SketchUp, MS Office
- **Programming Languages:** Python-3, R programming, C++, C Programming, SQL

INTERNSHIPS AND PROJECTS

Automated Feature Discovery Platform | TCS Innovation LABS, Kolkata [May'18 - July'18]

- Built **Residual Network**, **Generative Adversarial Network** and **sparsed CNN autoencoder** to extract features
- Developed network achieved **2% - 5%** better result on various benchmark datasets of well known UCR time series
- Developed an **export model executable** for clients using MATLAB that linked Feature Discovery Platform tool

Delay management at Howrah Railway Station | Prof. Goutam Sen, IIT Kharagpur [Jan'18 - Apr'18]

- Worked on **train simulation** to minimize the delay occurred by different trains while arriving at Howrah station
- Developed the model on **ARENA software** using **Markov Chain** simulation and **Queuing theory** in application

Operation and Heuristic Methods | Prof. Manoj Kumar Tiwari, IIT Kharagpur [Mar'18 - Apr'18]

- Optimized Travelling Salesman Problem using **Genetic Algorithm**, **Particle Swarm** and **Ant Colony Optimization**
- Using **neural networks**, improved the classification accuracy of multilabel wine tasting dataset up to **98.8%** in R

Association Rule Mining | Prof. Jhareswar Maiti, IIT Kharagpur [May'17 - June'17]

- **Improved** the **Multi-objective selection algorithm** to optimize association rules from occupational accident dataset
- **Optimized** the rules to **37 strong rules** from **103807 Apriori rules** using the Algorithm using R programming

Virtual Reality | Prof. Goutam Sen, IIT Kharagpur [Jan'17 - Apr'17]

- Built **car driving simulator** program in VR using Google-SketchUp for **designing 3D models** of car and environment
- Established **connections** between Virtual Reality gadgets and SketchUp models using **python script** in Vizard 5

TRAINING

South Eastern Coal Fields Limited | Head Quarters, Bilaspur [Dec'17]

- Developed Spot Productivity Improvement Scheme (PIS) for non-executives of underground and opencast mines
- Prepared detailed report on time study of 42 m³ Shovel and 240 Tonne Dumpers deployed for overburden removal
- **Calculated shortages** in the workforce and suggested installation of **GPS** device in the coal transportation trucks

ONGOING PROJECT

Introspecting Commercial Movie Recommendation Platforms | Prof. Saptarshi Ghosh, IIT Kharagpur [Sept'18 -Present]

- Analysing different centric patterns across networks formed by recommendations of Netflix and Amazon prime

Pneumonia Detection using Deep Learning | B-Tech Project, IIT Kharagpur [Sept'18 -Present]

- Detecting and classifying Pneumonia in chest X-rays of patients using CNN based stacked autoencoders

CERTIFICATIONS

Machine Learning

- A Course by Andrew NG that gave a broad introduction to ML, various classifiers, regression models datamining

IEEE Robotics Workshop

- Worked on Person Followed by Turret that chased person with the help of 'ATMEGA16' and SONAR device

COURSEWORK INFORMATION

Data Analytics | Probability and Statistics | Data Structure and Algorithms | Optimization and Heuristic Methods
| Operations Research | Quality Engineering | Recommender System in E-Business* | Social computing* (* ongoing)

AWARDS AND ACHIEVEMENTS

- Secured a **percentile** score of **96.63%** in JEE Advance 2015 among 1,17,238 students
- **Winner** of 6th International Mathematics Olympiad at a school level and secured an **international rank** of **829**

EXTRA CURRICULAR ACTIVITIES

- Bagged **Silver medal** in inter-hall tournament of AD-Design in **Technology General Championship** 2016-17
- **Built** bots for RoboSoccer (**Soccor playing bot**) and Summit (**Stair climbing bot**) during KSHITIJ (Annual Tech Fest)
- Developed a **business model** for **catering** for residents of Amlataria village as an alternative source of income