

Education

2016–2020 **Indian Institute of Technology Kharagpur**
BTech. (Hons.) in *Computer Science and Engineering*.

GPA 9.04/10

Work Experience and Internships

August 2020 **Goldman Sachs**, Bangalore, India.

Analyst in Engineering Division

- Part of the global team responsible for developing the production runtime infrastructure of the company
- Integrated several internal bug and issue tracking softwares as a part of a full stack development project.

May 2019 - **Accenture Technology Labs**, Bangalore, India.

Aug 2019 Research Intern

- Worked on stock price prediction using news articles and incorporated knowledge graph as domain knowledge
- Used Graph Convolutional Networks along with events for better representation of the real-world stock scenario
- Implemented novel joint training of Regression Models and Graph Networks for better predictions

Publications

Mar 2020 **Analysing the Extent of Misinformation in Cancer Related Tweets [Link]**.

- Authored by **Rakesh Bal***, Sayan Sinha*, Swastika Dutta, Rishabh Joshi, Sayan Ghosh, Ritam Dutt
- *14th International AAAI Conference on Web and Social Media (ICWSM 2020)* - (Atlanta, USA)

Sep 2020 **Two-Sided Fairness in Non-Personalised Recommendations [Link]**.

- Authored by **Rakesh Bal***, Aadi Swadipio Mondal*, Sayan Sinha*, Gourab K. Patro
- Accepted in *AAAI-21 Student Abstract and Poster Program* - (Vancouver, Canada) * - equal contribution

Relevant Projects

- NMT
- Analysed performance of various attention based NMT models such as Bahdanau and Transformer
 - The translation results were fed into a search engine and top results were analysed with the original queries

- Recommender Fairness
- Developed a system on determining fairness in recommender systems using election voting methods
 - Used traditional recommender system algorithms like Matrix factorization on SmartMedia Adressa Dataset
 - Applied the theory of electoral systems like SNTV, k-Borda and Monroe to measure fairness

- Fair GANs
- Investigated on methods to overcome dataset bias towards gender by balancing the images of the 2 classes
 - Used GANs (Cycle-GAN) for unsupervised domain translation in order to achieve dataset balancing

Skills

Languages Python, C, C++, Java, JavaScript, Matlab, Verilog

Libraries PyTorch, Keras, TensorFlow, Pandas, Angular, MongoDB, OpenCV, ROS

Relevant Courses

Computer Sc. Algorithms, Software Engineering, Switching Circuits and Logic Design, Computer Organisation & Architecture, Compilers, Operating Systems, Computer Networks, Theory of Computation

Maths and AI Discrete Mathematics, Probability & Statistics, Linear Algebra, Machine Learning, Image Processing, Reinforcement Learning, Deep Learning, AI & Ethics, Natural Language Processing

Awards and Achievements

Aug 2018 Awarded B-Certificate in drill and weapon training in National Cadet Corps (NCC)

Feb 2016 Secured All India Rank 191 in KVPY SX Stream organised by IISc, Bangalore

June 2016 Secured All India Rank 265 (amongst 200,000 candidates) in IIT-JEE Advanced 2016

May 2015 Recipient of National Talent Search Examination (NTSE) Scholarship

Jan 2009 Secured 5th position in District Level Chess Championship held at SCS College, Puri