

PRATIK DUTTA

Curriculum Vitae

Department of CSE
Indian Institute of Technology xyz
☎ (+91) 0000000, (+91) 0000000
✉ pratikabc@gmail.com
🌐 My Webpage
🐙 Github in LinkedIn 🗨 Skype



Education

- 2016–present **PhD, Computer Science & Engineering**, *Indian Institute of Technology*, Patna.
Protein-protein interactions, Protein structure, Genomic sequence, Multi-objective Optimization, Clustering, Machine Learning and Deep Learning
- 2013–2015 : **Master of Engineering, Information Technology**, *Indian Institute of Engineering Science & Technology*, Shibpur(Formerly Bengal Engineering and Science University, Shibpur).
- 2009–2013 : **Bachelor of Engineering, Computer Science & Technology**, *Indian Institute of Engineering Science & Technology*, Shibpur(Formerly Bengal Engineering and Science University, Shibpur).

Publications

Journal Articles

- 2020 **Pratik Dutta**, Sriparna Saha, Sanket Pai, and Aviral Kumar. A protein interaction information-based generative model for enhancing gene clustering. *Scientific Reports*, volume 10, pages 1–12. Nature Publishing Group, 2020, (**Impact Factor:4.122**).
- 2019 **Pratik Dutta**, Sriparna Saha, and Saurabh Gulati. Graph-based hub gene selection technique using protein interaction information: Application to sample classification. *IEEE Journal of Biomedical and Health Informatics*, volume 23, pages 2670–2676. IEEE, 2019, (**Impact Factor:4.217**).
- 2019 **Pratik Dutta**, Sriparna Saha, Saraansh Chopra, and Varnika Miglani. Ensembling of gene clusters utilizing deep learning and protein-protein interaction information. *IEEE/ACM transactions on computational biology and bioinformatics*. IEEE, 2019, (**Impact Factor:2.896**).
- 2018 Chandan Bandyopadhyay, **Pratik Dutta**, Rakesh Das, and Hafizur Rahaman. Improved designs for all-optical adder circuit using mach–zehnder interferometers (mzi) based optical components. *Journal of The Institution of Engineers (India)*, pages 1–15. Springer, 2018.
- 2017 **Pratik Dutta** and Sriparna Saha. Fusion of expression values and protein interaction information using multi-objective optimization for improving gene clustering. *Computers in Biology and Medicine*, volume 89, pages 31–43. Elsevier, 2017, (**Impact Factor:2.286**).

Communicated Journal Article

- 2020 **Pratik Dutta, Aditya Prakash Patra, and Sriparna Saha**, DeePROG: An Attention based Deep Multi-modal Architecture for Disease Gene Prognosis, In *IEEE Transactions on Biomedical Engineering*.

In Conference Proceedings

- 2019 **Pratik Dutta** and Sriparna Saha. A weak supervision technique with a generative model for improved gene clustering. In *2019 IEEE Congress on Evolutionary Computation (CEC)*, pages 2521–2528. IEEE, 2019.
- 2014 **Pratik Dutta**, Chandan Bandyopadhyay, and Hafizur Rahaman. All optical implementation of mach-zehnder interferometer based reversible sequential circuit. In *VLSI Design and Test, 18th International Symposium on*, pages 1–2. IEEE, 2014.

- 2014 **Pratik Dutta**, Chandan Bandyopadhyay, Chandan Giri, and Hafizur Rahaman. Mach-zehnder interferometer based all optical reversible carry-lookahead adder. In *VLSI (ISVLSI), 2014 IEEE Computer Society Annual Symposium on*, pages 412–417. IEEE, 2014.

Research Experience

Indian Institute of Technology, ABC

- June,2019 – present – **Identifying Protein-protein Interaction from Biomedical text.**
Developing a deep multi-modal architecture for accurately predicting protein interaction information from biomedical text.
Advisor : **Dr. abc xyz**, Associate Professor, Department of Computer Science & Engineering, IIT abc ([Personal Web-page](#))
- July,2018 – present – **Developing Deep Multi-modal Architecture for Biomedical Problems.**
Analyzing different modalities of genes like gene expression profiles, protein 3D structure, underlying amino acid sequence using popular deep learning models to obtain deeper insight into the underlying biological system.
Advisor : **Dr. abc xyz**, Associate Professor, Department of Computer Science & Engineering, IIT abc ([Personal Web-page](#))

Indian Institute of Technology, XYZ

- January,2015 – Dec,2015 – **Design and Synthesis of Reversible Multi-dimensional Nearest-Neighbour(NN) Quantum Circuit.**
Proposed an approach for designing and physically implementing of the multi-dimensional quantum circuits maintaining nearest-neighbor complacency that use minimal number of SWAP gates.
Advisor : **Dr. abc xyz**, Associate Professor, Department of Computer Science & Engineering, IIT abc ([Personal Web-page](#))
- 2012 – 2013 – **Text Document Clustering with Semantic Similarity through Wordnet.**
Improvement of the text document clustering task over conventional methods by introducing WORDNET and some better clustering algorithms.
Advisor : **Dr. abc xyz**, Associate Professor, Department of Computer Science & Engineering, IIT abc ([Personal Web-page](#))

Fellowships & Awards

- 2016 –present – **Visvesvaraya Fellowship** of Ministry of Electronics and Information Technology (MeitY), Government of India, as a PhD research scholar in Indian Institute of Technology Patna.
- 2019 Receipt of **Visvesvaraya Travel Grant** to attend a international conference **IEEE Congress on Evolutionary Computation, 2019** in Wellington, New Zealand.
- 2018 Recipient of **SciGenome Research Foundation (SGRF) GYAN Scholarship** to participate **Nextgen Genomics, Biology, Bioinformatics and Technologies-2018** meeting at Jaipur India from 30th September to 2nd October 2018.
- 2015 Awarded under **Students Reward Programme** at the Annual General Meeting of **Global Alumni Association of Bengal Engineering and Science University(GAABESU)**.

Academic Achievements & Recognitions

- 2018 **Session Chair of the session "Prediction"** in 25th **International Conference of Neural Information Processing (ICONIP 2018)**, Siem Reap, Cambodia.
- 2018 Invited to conduct lab sessions in **"Training Program on Machine Learning For Ocean Acoustics and Climate Data Analysis"**, during 22-36 October 2018 at **Defence R&D Organization-Naval Physical & Oceanographic Laboratory (DRDO-NPOL)**, Kochi, Kerala.

Computer skills

Programming Languages Python, PyTorch, keras, R, C, C++, Advanced JAVA
Web Technologies HTML 5, PHP, JSP, Javascript
Database SQL, MySQL, Apache, Neo4j

Position of Responsibility

2016-2020 **Executive member of IEEE Student Branch**, IIT ABC.
April 1-5, 2019 **Organizer, GIAN Workshop on subjects**, IIT ABC.

Teaching Assistantship

Fall, 2019 : **CS564: Foundations of Machine Learning**, IIT ABC.
Spring, 2019 : **CS342: Operating System Lab**, IIT ABC.
Fall, 2018 : **CS564: Foundations of Machine Learning**, IIT ABC.

Referees

Dr. XXXXX XXXXX

*Associate Professor, Department of
Computer Science & Engineering*
Institute name
✉ abc@gmail.com

Dr. XXXXX XXXXX

*Associate Professor, Department of
Computer Science & Engineering*
Institute name
☎ +(601) 877-6236
✉ abc@gmail.com

Dr. XXXXX XXXXX

*Associate Professor, Department of
Computer Science & Engineering*
Institute name
☎ +(601) 877-6236
✉ abc@gmail.com