

# Partha Pratim Saha

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Interested to pursue a PhD in **Natural Language Processing, Deep Learning, Machine Learning** or in a related area

## II Profile Summary

- Over **8 years of work experience** including **Machine Learning, Deep Learning & Natural Language Processing, AI**
- Expertise in collecting, analyzing, and managing quantitative & qualitative data which provide information to top management for improvement & cost reduction initiatives in research
- Have capabilities to lead tasks involving **Machine Learning, NLP** algorithms to provide actionable and influential decisions

## II Academic Details

- **M.Tech. (DataScience & Engineering)**, Birla Institute of Science and Technology (BITS ), 2019-Present, **SGPA: 8.63/10**  
→ **Courses undertaken:** Data Mining, Machine Learning, Deep Learning, NLP & Text Mining, Information Retrieval, Big Data Systems, Intro to Data Science, Mathematics for Data Science, Data Visualisation, Statistical Mathematics, Algorithmic foundation for Data Science
- **B.Tech. (Computer Science)**, West Bengal University of Technology(India), 2006-2010, **GPA: 8.49/10, Rank: 4**

## II Research Interests

|                         |                             |                      |                    |
|-------------------------|-----------------------------|----------------------|--------------------|
| Artificial Intelligence | Machine Learning            | Data Mining          | Probability        |
| Neural Networks         | Information Retrieval       | Statistical Modeling | Data Analytics     |
| Deep Learning           | Natural Language Processing | Predictive Modelling | Python Programming |

## II IT Skills

- **Text Mining and NLP:** Document Similarity, Language Modelling, Word2Vec, Machine Translation
- **Healthcare:** Cancer Genomics, Bioinformatics, Gene Regulatory Network architecture
- **Programming Language:** Python, Objective-C, C, Java
- **Deep Learning:** Neural Network, CNN, RNN, LSTM, Transformer (Attention) architecture, TensorFlow, Keras
- **Machine Learning:** Regression, Classification, Clustering, Tree Based Algorithms, Bagging, Boosting
- **Data Science:** Data Pipeline Modelling, Data Pre-processing, Data Cleaning, Data Visualization
- **Tools and Libraries:** Spacy, SciSpacy, Pandas, Sklearn, Jupyter, Anaconda, Numpy, Seaborn, SQL

## II Professional Projects Experience

- **Birlasoft & Johnson and Johnson R&D (Jensen Research), Senior Data Scientist**, Oct'20 - Date  
→ Building Search Engine for healthcare with medical documents using NLP & Text mining for J&J Established AI Products
- **IRIS Software Inc, Senior Data Scientist**, Aug'19 – Mar'20  
→ Worked on end to end Natural Language Processing Pipeline Techniques for text mining, & document similarities
- **Damodar Valley Corporation, Assistant Engineer**, Dec'17 – Aug'19  
→ Worked in healthcare, bioinformatics project to identify candidate driver genes in a cluster of gene regulatory network
- **Infosys Technologies Limited as Senior Systems Engineer**, Jan'11 – Jul'15  
→ Worked in the area of application development to production of iPhone & iPad applications using Objective-C

## II Projects Executed

- **Sequence Alignment (Language: Python)**  
→ Performed Dynamic Programming in healthcare for genomic sequence alignment from the input data
- **Branch Correlation in Programming Paradigm (Language: Python) Skills used:** Data-driven Programming  
→ Utilized ROSE compiler to instrument given program to produce dynamic outcome (T/F) for conditional branches
- **Tririga Building Assistant (IoT - TRIRIGA Assistant) : (Language: Python)**  
→ Worked on the **Anomaly Detection** model that runs in every 15 min gap from CISCO DNA sensor data, **USA**  
→ Worked on a **Guest KPI model** that runs everyday to predict which floor has guest(s).

## II Key Accomplishments

- Presented 'Attention Is All You Need' Paper at **Portland State University, USA**
- Participated in the **RegML 2020 Conference, University of Genova, Italy**
- Completed Data Analytics Global Internship, organized by Taken Mind and **United Nation, UK**

## II Awards & Achievements

- Awarded for **ICML 2021** with full registration fee to attend conference and workshop track
- Got selected to attend the **Google Developer's program, India, 2019**
- Got selected in **AI4IMPACT** at **AI Singapore Summer School, Singapore, 2021**
- Got selected in **Summer School on AI with focus on Computer Vision and ML**, IIIT Hyderabad, India, 2021

## II References

- **Prof. John M. Acken** (PhD, Stanford), Research Professor, Portland State University, USA
- **Dr. Naresh Sehgal** (PhD, Syracuse), Former Security Lead (Intel USA), VP (Cloud Engineering) at Nova Signal, SantaClara, USA
- **Mayank Rasu**, Univ of Toronto, Vice President, Barclays Investment Bank