Atanu Dey

HP Inc., 9th Floor, Salarpuria GR Tech Park, Whitefield, Bangalore, India (+91) 8617488939 | (+91) 8100536846 | <u>atanu.dey.cse@gmail.com</u> Personal Profile: https://atanudeyiitkgp.github.io/AtanuDey/

Teaching & Research Interest

- Python Programming Language (Basics, Pandas, Numpy, Scipy, Scikit Learn, Flask, Selenium)
- Machine Learning (Linear Regression, Logistic Regression, SVM, KNN, Decision Tree, Random Forest, Clustering) & **Deep Learning** (Neural Network Concept, Activation Function, Back Propagation, RNN, LSTM)
- Natural Language Processing (NLP) (Word2Vec, Sentiment Analysis Techniques, Textual Entailment, Machine Translation)
- Statistical Models (T-Test, Z-Test, Hypothesis Testing, Sensitivity Analysis, Six-Sigma Concept, Forecasting)
- Algorithm (Sorting, Searching, Graph Traversal, Dynamic Programming, Analysis of Algorithm)
- Operational Research/Decision Modelling (LPP, Duality Theory, Transportation Problem, Assignment Problem)

Education -

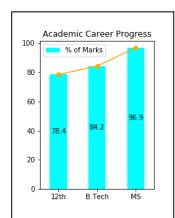
Master of Science by Research (MS by Research)

July, 2016 – October, 2018

Indian Institute of technology, Kharagpur (IIT-Kqp). CGPA-9.69/10 Faculty contact: Prof. Mamata Jenamani & Prof. Jitesh J Thakkar

Thesis: Sentiment Analysis using n-gram Lexicon and Cross-Domain Features.

Courses taken: Recommender System in E-Business, Decision Modeling, Production Planning and Inventory Control, Natural Language Processing, Machine Learning.



Bachelor of Technology (B.Tech),

July, 2010 – June, 2014

Govt. College of Engineering & Textile Technology (GCETT), Berhampore, West Bengal University of Technology (WBUT), India. DGPA-8.42/10 Specialization: Computer Science & Engineering (CSE). Thesis: A Proposed Embedded System for the Calculation of Trigonometric and Algebraic Functions

Higher Secondary (12th Standard),

April, 2009

Jujersa P.N. Manna Institution, Howrah West Bengal Council of Higher Secondary Education, India. Marks-74.8% Specialization: Science.

Experiences

E-Commerce Quality Data Scientist, HP Inc., Bangalore, India

March, 2019 – Present

- Project 1: QPS (Quality Predictive System)
- An alert system is developed to alert managers/operations-managers on the current spike of dispatches in comparison with history using Six-Sigma SPC (Statistical Process Control) methods.
- Developing an IDP (Intelligent Dispatch Process) by finding accurate issues from the conversation of agent and customer using Deep Neural Net.

Project 2: Eagle (Automated quality analysis of consumer review)

- Proactive product and service quality analysis using "sentiment analysis" on consumer reviews.
- To understand the "what customer wants?" (customers' expectation) which provides meaningful insights to improve the quality of product and service.

Project 3: Early warnings Analysis

- Analysis of product's quality before launching or just in 1st week of launching using NLP and ML (Machine Learning).
- Many sources of consumer reviews are used for this project such as "tech-blogs" data, internal HP betatesting data, and historical case-log data.

Junior Data Scientist, Tookitaki Technologies Pvt. Ltd., Bangalore, India April, 2018 – February, 2019 Project: Reconciliation Management System (Pattern-Based matching solution)

- Classification using Machine Learning algorithms like Linear Regression, Logistic Regression, SVM, NB.
- Pattern-based solution using data science algorithm such as Subset-Sum and Longest Common Subsequence.

Junior Research Fellow, E-Business Centre of Excellence Lab, IIT Kharagpur. April, 2016 – March 2018 Faculty contact: **Prof. Mamata Jenamani**

- E-Business Centre of Excellence project, sponsored by Ministry of Human Resource Development (MHRD), Govt. of India.
- Working Area: Sentiment Analysis using python.

Research Associate, BCI – HCI Lab, IIT Kharagpur.

June, 2015 – March, 2016

- Research on Brain Computer Interface to investigate states of mind and mental workload using EEG devices.
- Working on Virtual Keyboard Standardization of Indian Languages for smart phone.

Software Engineer, Capqemini India Pvt. Ltd., Hyderabad, India

September, 2014 – June, 2015

• Insurance domain project "Phoenix", Client "XL - CATLIN". Platform – Guidewire, Java.

Publications (For Sentiment Analysis, NLP & ML) –

Journals (Published):

- **1. Atanu Dey**, Mamata Jenamni, Jitesh J Thakkar, "Senti-N-Gram: An n-gram lexicon for sentiment analysis", *Expert Systems with Applications*, *103*, *pp.92-105*, *Elsevier*, 2018.
- **2. Atanu Dey**, Mamata Jenamni, Jitesh J Thakkar, "Cross-D-vectorizers: a set of feature-spaces for cross-domain sentiment analysis from consumer review", *Multimedia Tools and Application, pp.1-19, Springer, 2019.*

Conferences (Published):

- **1. Atanu Dey**, Mamata Jenamni, Jitesh J Thakkar, "Lexical TF-IDF: An n-gram Feature Space for Cross-Domain Classification of Sentiment Reviews", 7th international conference on Pattern Recognition and Machine Intelligence (PReMI), IEEE & Springer, December 5th 8th, 2017 in ISI Kolkata, India. (**Best Paper Award**)
- **2. Atanu Dey**, Mamata Jenamni, Jitesh J Thakkar, "Sentiment wEight of N-grams in Datasets (SEND): A Feature-set for Cross-Domain Sentiment Classification", 9th international conference on Advance Pattern Recognition (ICAPR), IEEE & IAPR, December 28th 30th, 2017 in ISI Bangalore, India.

Some Other Publications

Journals (Published):

- **1.** Abul Hasnat, **Atanu Dey**, Santanu Halder, Debotosh Bhattacharjee, "Square Root and Inverse Square Root Computation using a Fast FPGA Based Architecture", *Journal of Active and PassiveElectronic Devices (JAPED)*, Old City Publishing, 13, 2018.
- **2.** Abul Hasnat, Tanima Bhattacharyya, **Atanu Dey**, Santanu Halder, Debotosh Bhattacharjee, "A Novel Sorting Algorithm using Quotient and Remainder", *Journal of Engineering and Applied Sciences (JEAS)*, 12, Medwell journals, 2017.

Conferences (Published):

- 1. Abul Hasnat, **Atanu Dey**, Md. Azizul Hoque, Santanu Halder, Debotosh Bhattacharjee, "A Novel Unit Circle Approach for Computation of Sine Function", 2nd international conference 2017 Devices for Integrated Circuit (DevIC), IEEE, March 23-24, 2017 in Kalyani, West Bengal.
- 2. Abul Hasnat, Tanima Bhattacharyya, **Atanu Dey**, Santanu Halder, Debotosh Bhattacharjee, "A Fast FPGA Based System for Determining the Square Root and Inverse Square Root Value", *2nd international conference 2017 Devices for Integrated Circuit (DevIC), IEEE, March 23-24, 2017 in Kalyani, West Bengal.*
- **3. Atanu Dey,** Sourav Bhattacharjee, Debasis Samanta, "Recognition of Motor Imagery Left and Right Hand Movement using EEG", *IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT-2016), IEEE, May 20-21, 2016 in Bengaluru.*
- **4. Atanu Dey**, Tanima Bhattacharyya, Abul Hasnat, Santanu Halder, "A Fast FPGA Based Architecture for Determining the Sine and Cosine Value", 5th International Conference on Advances in Communication Network and Computing, Elsevier, Feb 21-22, 2014 in Chennai, India.

Academic Achievements -

- Secured 9.69 CGPA in scale of 10.0 in MS (by Research) (**Top 5%** in the School)
- Qualified All India Examination GATE (**Top 5%** total participants 100000+)
- Secured 4th rank in Dept. of CSE, GCETTB during B.Tech (**Top 6%**, total students 60+)
- Secured 5798th rank in West-Bengal Joint Entrance Examination (state level engineering entrance examination), (**Top 4%**, total participants 120000+)
- Secured 5th rank from school in higher-secondary examination, (**Top 2%**, total students 250+) 2009

Award/Scholastic Achievements -

- PReMI Springer Student Award for Lexical-TFIDF Paper from 7th International Conference on Pattern Recognition and Machine Intelligence (PReMI 2017),
 - Award money INR 5000

8th December, 2017

- Received Junior Research Fellow (JRF) award from Ministry of Human Resource Development via
 IIT Kharagpur. Received Fund INR 25000 / Month (for two years)

 April, 2016 March, 2018
- Maintained institute rank within Top 5 over last 3 years at GCETT Berhampore.
 Received Scholarship for the same INR 6000 / Semester (for three years)
- Recipient of Chief-Minister-Scholarship from West Bengal Government.
 Scholarship Amount INR 15000

Certifications

• Oracle Certified Professional Java Programmer (JAVA SE- 6).

November, 2014

Capgemini Fresher Learning Program- Java Technologies September, 2014 – November, 2014
 Core JAVA, Advance JAVA, RDBMS, JDBC, HTML, JavaScript, JSP, Spring, JPA.

Position of Responsibilities -

- **Teaching Assistant** in a NPTEL (National Programme on Technology Enhanced Learning)
 Course "E-Business" at IIT Kharagpur.

 July, 2017 October, 2017
- **Teaching Assistant** in a Lab-Course ("Information System Lab") at Dept. of Industrial and Systems Engineering, IIT Kharagpur.

 July, 2017 December, 2017
- **Teaching Assistant** in a theory course ("Recommender System in E-Business") at Dept. of Industrial and Systems Engineering, IIT Kharagpur.

 July, 2017 December, 2017
- **Teaching Assistant** in a workshop on "Web Data Analytics using R and Python" at IIT Kharagpur.

 September 6th -10th, 2016
- **Trainer** in "one day Latex workshop" at Dept. of Industrial and systems Engineering, IIT Kharagpur.

 December 9th, 2016

Technical Skills -

Languages : C, Java, Python, VHDL, SQL
 Software Packages : Latex , Matlab, Xilinx
 Platforms : Windows and Linux

Skills : Natural Language Processing, Sentiment Analysis, Machine Learning
 Google Scholar Link : https://scholar.google.com/citations?hl=en&user=nxTq1GIAAAAJ

• GitHub Link : https://github.com/atanudeyiitkgp

LinkedIn Link : https://www.linkedin.com/in/atanu-dey-38a168aa/

English Proficiency Test -

IELTS Score: Overall: 6.5 (Speaking: 6.5; Reading: 6.5; Writing: 6.5; Listening: 6.0) 12th October 2019

Extracurricular Activities

Painting (Oil, Acrylic and water): Completed 5th year painting exam (Graduated) from 'Bangiya Sangeet Parishad', India.

National Service Scheme (NSS): Active member in a unit of GCETTB, WB, India 2013 – 2014

Programming Contests: Winner in Collectiva Programming Contest.

September, 2012

National Cadet Corps (NCC): Successfully completed A-Certificate.

December, 2005

Personal Details -

Nationality: Indian
 DOB: 5th April, 1992

Gender: Male

Yours sincerely, Atanu Dey.