

Professional Profile Summary

Data Scientist with 8+ years of professional experience helping the organization by developing innovative solutions, providing the blueprint for the conversion of the business problems to data science problems and support the global leadership to extract meaningful insights from various data sources to take appropriate actions.

Areas of Interest include Machine Learning, NLP, Data Science, Causal inference, Software Development.

Patents	Research Publication	Academic Projects	Education	Skill Highlights
5	6	8	M.Tech and UG in Computer Science, Pursuing Ph.D. in NLP	Data Science, Machine Learning, NLP, Casual Inference, Data Structure, Algorithm Design, Software Engineering, C, C++, JAVA, Python, SPSS.

Professional Experience

Amazon – April 2021 to Present

- Data Scientist II :
 - In C-Ops, PARS team in Amazon, handling various machine learning and NLP projects related to ASIN classification, automated audit reporting.
 - In WHS tech team in Amazon, created a knowledge graph from unstructured Textual Injury reports
 - IN CBA India, I'm creating an automated AWS S3 event-triggered pipeline to measure incremental causal attribution of various programs toward new customer acquisition using the Double Machine Learning (DML) framework.

IBM Research – May, 2018 to March, 2021

- Advisory Data Scientist: HR Engagement, Diversity, and Inclusion
 - Contributed to build the Machine Learning and NLP Models for extraction and recommendation of the action items from unstructured raw engagement data and for theme extraction from ESQ data. Statistical and textual data comparison analysis for IBM's internal Poll's data and Glassdoor data. Design the diversity algorithm and supported various ad-hoc requests.
- Data Scientist: Center for Engagement and Social Analytics
 - Applied Machine learning and NLP techniques to generate various insights from IBM engagement survey, tested various hypothesis and supported ad-hoc data requests. Design and implemented aggregated similarity measures between two spotlight cards as a part of cognitive leadership project.

IBM Research – July, 2015 to April, 2018

- Research Software Engineer: AI Science Group
 - Contributed to build the Machine Learning Models to build IBM Watson Recruitment platform using Spark. Two "A" level research accomplishments, Top contributor in IBM Skillsmart project in terms of data collection module, taxonomy generation, skill definition API, which won the 1st prize within IBM globally.

Internship – May, 2014 to July, 2014 and July 2012

- Extreme Blue Intern: IBM Research Lab
 - Using ML and NLP for job data normalization
- Software Engineer Intern: DRDO, Hyderabad, India
 - Integrated RT-Lab and Matlab to create UI for installing the device driver of 1553 ADC-DAC card.

Education

Qualification	Year	Institution
Pursuing Ph.D. in AI	2020- 2025	Indian Institute of Technology, Kanpur
PG: M.Tech in Computer Science and Engineering	2013-2015	Indian Institute of Technology, Roorkee
UG: B.E in Computer Science and Technology	2009-2013	Bengal Engineering and Science University, Shibpur

Skills and Achievements

- Computer Languages: C, C++, Python, Java, R
 - Languages SRW: English, Bangla, Hindi
 - Certifications: SATBOT-TRICKS in the field of Automated Robotics by ROBOSAPIENS, Ethical Hacking Expert (Level- I) by Tech. Defense
 - Contests Winner: **MUPHORIA** by MU-SIGMA - ALL INDIA RANK-1 in 2011, **ACM International Collegiate Programming (ACM ICPC) Regional Finals** in 2011, **Codezilla** by Mathematics Department of IIT Roorkee - came in 1st in 2013, **In-Out Hackathon 4.0** in 2017 and won Blockchain Track Consensys prize in 2017.
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Patents

- "System of estimating fungibility or substitutability between skills by combining skill-similarities obtained from multiple information sources"
 - "Method of choosing exemplars from a large multi-class data-set given few exemplars of one of more of the classes"
 - "System and Method to produce Generalized Representation of Job Description Documents and Calculate Similarity using the Representation in Recruiting Domain"
 - " App-lause: VR based Audience Simulation for Immersive Rehearsals"
 - "Recommending Cuts for Getting a Particular Country-Specific Motion Picture Content Rating of Movies/TV Shows"
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Research Publications

- Joydeep Mondal, Sarthak Ahuja, Kushal Mukherjee, Sudhanshu Shekhar Singh "Benchmarking of a Novel POS Tagging Based Semantic Similarity Approach for Job Description Similarity Computation" ESWC 2018. https://2018.eswc-conferences.org/wp-content/uploads/2018/02/ESWC2018_paper_111.pdf
- Shrihari Vasudevan, Moninder Singh, Joydeep Mondal, Michael Peran, Ben Zweig, Brian Johnston, Rachel Rosenfeld "Estimating fungibility between skills by combining skill-similarities obtained from multiple data sources" Data Science and Engineering Journal 2018. https://link.springer.com/article/10.1007/s41019-018-0075-3?wt_mc=Internal.Event.1.SEM.ArticleAuthorOnlineFirst&utm_source=ArticleAuthorOnlineFirst&utm_medium=email&utm_content=AA_en_06082018&ArticleAuthorOnlineFirst_20180925
- Sarthak Ahuja, Joydeep Mondal, Sudhanshu Shekhar Singh, David Glenn George "Similarity computation exploiting the semantic and syntactic inherent structure among job titles" ICSOC 2017. https://link.springer.com/chapter/10.1007/978-3-319-69035-3_1

- Rakesh Ramesh Rao Pimplikar, Kalapriya Kannan, Abhik Mondal, Joydeep Mondal, Sushant Saxena, Gyana Parija, Chandra Devulapalli "RISE: Resolution of Identity through Similarity Establishment on Unstructured Job Descriptions" ICSSOC 2017. https://link.springer.com/chapter/10.1007/978-3-319-69035-3_2
 - Rakesh R Pimplikar, Kushal Mukherjee, Gyana Parija, Harit Vishwakarma, Ramasuri Narayanam, Sarthak Ahuja, Rohith D Vallam, Ritwik Chaudhuri, Joydeep Mondal "Cogniculture: Towards a Better Human-Machine Co-evolution" Arxiv <https://arxiv.org/abs/1712.03724>
 - Sandip K Chaurasiya, Joydeep Mondal, Suman Datta "Field-of-View based Hierarchical Clustering to Prolong Network Lifetime of WMSN with Obstacles" , ICECCE 2014. <https://ieeexplore.ieee.org/abstract/document/7086638/>
 - A Golestani, M Masli, NS Shami, J Jones, A Menon, J Mondal" Real-Time Prediction of Employee Engagement Using Social Media and Text Mining" , ICMLA 2018. <https://ieeexplore.ieee.org/abstract/document/8614250/>
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Academic Projects

- MeasEval: Counts and Measurements (Ph.D. Sept 2020 – Dec 2020, IIT Kanpur): NLP techniques used to extract measurement and establish relation between measurement and quantities and units from scientific documents.
- Covid 19 Hotspot and cold spot identification(Ph.D. Sept 2020 – Dec 2020, IIT Kanpur): Using www.covid19.org data identified hotspot and cold spot in terms of covid positive in India.
- Naming Schemes to manage huge data in FIB in Named Data Networking (M.Tech thesis (Aug 2014 to May 2015), IIT Roorkee) : This project was concerned with proposing some new name encoding schemes for BIG DATA management in Named Data Networking (NDN) and Literature survey of naming and routing schemes in NDN.
- Nirbhaya Mobile App (February 7-9, 2014, Microsoft Hackathon @IIT Roorkee): Developed a Windows phone 8 app that aims towards providing better security to women. The app uses the cloud and gps based services to perform this task.
- Author Profiling (February 2014 to April 2014, IIT Roorkee): This project was concerned with Authorship analysis by using several clustering techniques and several training mechanism.
- Noise Removal from a Dataset (January 2014 to February 2014, IIT Roorkee): This project was concerned with making an inconsistent dataset to a consistent dataset by using several noise reduction and outlier detection methods
- Mobile Cloud Computing in Android (February 2014-April 2014, IIT Roorkee): This project was concerned with making a mobile cloud using wifi-direct, to use it for high resource consuming applications.
- Determining Similarity between Two Electrical Circuits through Partial graph Isomorphism (B.E Final Year Project (July 2012 to March 2013), IEST, Shibpur): The project was concerned with finding similarity between two electrical circuits thorough partial graph isomorphism