

Apratim Biswas

Work Authorization: Permanent Resident (Green Card)

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DATA SCIENTIST | R&D ENGINEER

Data Scientist and experienced R&D Engineer with a background in Materials Engineering. Experienced in translating data to meaningful stories and actionable intelligence. Knowledgeable of best practices in research, data collection, and data analysis. Adept in leading diverse teams, engaging internal and external stakeholders, and implementing process innovations.

Core Competencies

- Data Science
- Research and Development (R&D)
- Machine Learning
- Data Visualization
- Data Analytics
- Exploratory Data Analysis (EDA)
- Inferential and Predictive Modeling
- Natural Language Processing (NLP)

TECHNICAL PROFICIENCIES

Platforms	Linux Windows IBM Cloud Google Colaboratory
Tools	Python SQL Pandas Numpy Scikit-Learn Keras TensorFlow Tableau Microsoft Excel Jupyter Lab Minitab Matplotlib IBM Db2 HSC Chemistry MetSim
Portfolio	Tableau Public GitHub Medium Personal Webpage

PROFESSIONAL EXPERIENCE

Data Science Immersive Fellow, General Assembly, Remote from DC (8/2020 to 11/2020)

Completed a full-time intensive Data Science program. Gained hands-on experience analyzing large real-world datasets and modeling them using various machine learning algorithms. I also added to my experience in exploratory data analysis and translating data to meaningful stories. List of selected data science projects:

- Listening to customers is central to a successful enterprise. However, digesting large volume of reviews, say >50,000, whether from one product or multiple lines of products and services is challenging. Using natural language processing, I developed a tool to:
 - i) Cluster customer reviews based on their content. This helps us learn about customers.
 - ii) Extract high-level information for each cluster at the topic level from the feedback. Such information can help us improve and/or enhance products/services.
- Developed a model using natural language processing to classify any randomly selected comment as belonging to one of two very similar subreddits. Model classified comments accurately 96% times.

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Metallurgist and R&D Engineer, Gopher Resource, Tampa, FL (9/2012 to 3/2019)

Led corporate research and development, including creating mass balance models and furnace feeds to improve sustainability and enhance production models. Oversaw process development from lab scale through full production. Managed large plant-scale floor experiments and oversaw process engineering design and operational improvements. Facilitated root cause analysis. Supervised external process consultants.

- Designed and implemented process improvements that delivered 80% increase in selenium yield in lead and 90% decrease in selenium in discharged water.
- Developed and implemented new process to make solid waste 'slag' created in smelting process non-hazardous, resulting in >70% decrease in hazardous slag.
- Improved lead production outputs with root cause analysis on low production in special circumstances.
- Developed new procedures to collect and analyze accurate data from process design through implementation and maintenance.

Graduate Research Fellow, University of Florida, Gainesville, FL (8/2007 to 12/2011)

Conducted research on the development of processes to synthesize TiO_2 - SiO_2 nanofibermats for use in the lunar environment, including synthesis and characteristic of nanofibers and filtration properties. Developed processes to make more flexible fibermats in comparison to ceramic fibers in use at the time. Taught undergraduates in materials science and engineering.

EDUCATION**Ph.D. in Materials Science and Engineering**, 2012

University of Florida, Gainesville, FL

Research: Electrospun ceramic fibermats for filtrations application in lunar environment

B.S. in Metallurgy and Materials Engineering, 2007

Indian Institute of Engineering Science and Technology, Shibpur, West Bengal, India

IBM Data Science Professional Certificate, 2020