Stuti **Nayak**

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"Great things never came from comfort zones."

Experience

Clinical Data Science, Maastricht University
Maastricht, The Netherlands

RESEARCHER — *September 2019 - September 2020*

- In charge of setting up an infrastructure for federated learning for multiple cohorts of Dementia in the Netherlands
- Involved semantic data modeling to enhance data processing
- Aided in writing project proposal

Institute of Data Science, Maastricht University
Maastricht, Netherlands

STUDENT RESEARCH ASSISTANT — *July 2017 - February 2019*

- Main Research Focus: Biomedical Metadata Quality Assessment
- Used topic modeling and machine learning as a means to assess the quality of biomedical metadata
- Using deep learning to predict metadata with the help of scientific publications

Delhi Metro Rail Corporation Ltd.
New Delhi, India

STUDENT INTERN — *May 2015 - June 2015*

Developed a web application using PHP using the platform called laravel for the Customer Relation Management System (CMRS)

Foundation of Ecological Society (FES)
Ujjain, India

STUDENT VOLUNTEER — *Dec. 2013 - Dec. 2013*

Understood the working of the NGO at village by attending various meetings that were conducted and by taking interviews of the people living there

Education

Department of Data Science and Knowledge Engineering, Maastricht University
Maastricht, Netherlands

M.SC. IN DATA SCIENCE IN DECISION MAKING — *Feb. 2017 - Feb. 2019*

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT)
Gandhinagar, India

B.TECH. IN INFORMATION AND COMMUNICATION TECHNOLOGY — *July 2012 - May 2016*

Skills

- **Languages**: Java, Python, R
- **Databases and Web Technologies**: MySQL, SPARQL, PostgreSQL, Protégé, Laravel, Unity 3D, GraphDB, scikit-learn, PyTorch, Docker

Relevant Coursework

GRADUATE

Algorithms for Big Data, Information Retrieval and Text Mining, Data Mining, Model Identification and Data Fitting, Mathematical Optimization, Stochastic Decision Making and Ontology Engineering

UNDERGRADUATE

Object Oriented Programming, Database Management System, Web Data Management, Data Mining and Warehousing, Introduction to Quantum Mechanics, Quantum Computation, Optimization, Calculus and Complex Variables, Introduction to Discrete Mathematics, Logic for Computer Science and Algebraic Structures

Projects

Automated Prediction of Experimental Metadata from Scientific Publications (Link) *Maastricht, Netherlands*

Master Thesis Project *Sept. 2018 - Feb. 2019*

- Used deep learning (CNN and BiLSTM) to predict metadata
- Comparison of performances of Machine Learning and Deep Learning, where CNN has the best performance

Quality Assessment of Biomedical Metadata using Machine Learning *Maastricht, Netherlands*

Internship Project *March 2018 - July 2018*

- Used Binary Classification on a gold-standard data to assess the biomedical metadata quality assessment
- Comparison between multi-class classification and binary classification, binary classification

Quality Assessment of Biomedical Metadata using Topic Modeling *Maastricht, Netherlands*

Research Project *July 2017 - Jan. 2018*

- Used topic modeling to cluster similar metadata elements
- Used BioSamples dataset as a use case to check the feasibility

Prediction of Atrial Fibrillation (AFib) Recurrence for patients undergoing Electro-Cardioversion *Maastricht, Netherlands*

Masters Research Project *Sep. 2017 - Jan. 2018*

Developed a gradient boosting model to see which set of features help predicting the recurrence of AFib. The clinical features like age, height, BMI were found to be of high importance

Discovery connectivity in brain *Maastricht, Netherlands*

Masters Research Project *Feb. 2017 - Jun. 2017*

Developed a method to analyze detect non-linear spectral causality in multivariate system for understanding connectivity in brain

Query execution in column stores vis-à-vis row stores *Gandhinagar, India*

B.Tech Project *Jan. 2016 - April 2016*

- Literature survey of performance column stores when compared to row stores in read queries
- Comparison of results on various databases using TPC-H benchmark

Research

Conference, Workshops & Presentation

2020	**Health-RI Conference 2020**, Presented poster on the research infrastructure for federated learning	*Utrecht, NL*
2019	**Connected Data London**, Workshop regarding graph databases and knowledge graphs	*London, UK*

Research Papers

2020	**MIND 2020, Springer Conference**, Personal Health Train on FHIR – a privacy preserving federated approach for analyzing FAIR data in healthcare	*Accepted*
2019	**Journal of Data and Information Quality**, Automated Prediction of Experimental Metadata from Scientific Publications (Under review)	*Submitted October 2019*
2018	**Semantic Web solutions for large-scale biomedical data analytics (SeWeBMeDA-2018)**, Quality Assessment of Biomedical Metadata Using Topic Modeling	*Workshop Paper*

Leadership and Service

Maastricht, Netherlands

Student Ambassador, The Future of a Data-Driven Society *January 26, 2018*

Volunteered in organizing the event and handling all the registrations

Gandhinagar, India

Member of Sports Committee, Student Body Government (DA-IICT) *July 2015 - April 2016*

Helped in organizing the Sport festival and various events related to sports the whole year round