

Meenal Jhajharia

meenaljhajharia.com | meenaljhajharia2304@gmail.com

EDUCATION

UNIVERSITY OF DELHI
CLUSTER INNOVATION CENTRE

BTECH IN IT & MATH

Sophomore Year
GPA: 7.3 / 10.0

COURSEWORK

Statistics and Probability
Graph Theory
Linear Algebra
Design and Analysis of Algorithms
Data Structure and design
Academic writing and Communication
Economic Behaviour
Appreciating Literary Works

MOOCs

Statistical Learning
Bayesian Machine Learning

RESEARCH INTERESTS

Natural language processing
Graph Theory
Dimensionality Reduction
Bayesian Statistics
Ethics of AI
Cognitive Computing

SKILLS

Python
L^AT_EX
Matlab
Shell
Java
MySQL
C/C++

LINKS

Github: [almostmeenal](#)
LinkedIn: [meenaljhajharia](#)

EXPERIENCE

INDIAN STATISTICAL INSTITUTE

SUMMER INTERNSHIP

Summer 2020 | Kolkata, India

Worked with **Prof. Ujjwal Maulik** on Non Linear Dimensionality Reduction- Algorithms based on canonical feature extraction techniques such as PCA and LDA applied through Graph Embedding. Presented a short presentation and report on the same to **Prof. Sanghamitra Bandyopadhyaya** (Director, ISI Kolkata)

PROJECTS

UNSUPERVISED KEYWORD EXTRACTION

NATURAL LANGUAGE PROCESSING

January - March, 2021

Formed an unsupervised, graph-based algorithm for Keyphrase Extraction that exploits syntactic relations using dependency parsing, augmented with local text attributes. We reconstruct dependency trees in a Hyperbolic space to locate key information in a document, and then rank candidates on statistical features. To our knowledge, this is the first work that uses hyperbolic geometry for keyphrase extraction.

REFERENCE MANAGEMENT TOOL

SEMESTER LONG PROJECT

September - November, 2020

A Dashboard created with MySQL and Python backend to collect Metadata of Research Papers, allowing user to effectively search, edit and organize. Topic modeling was implemented using LDA to group papers. The tool took input as title or PDF and automatically retrieved Metadata by scraping through Google Scholar and CrossRef.

MODELING MOVEMENT OF AQUATIC ECOSYSTEMS

MATHEMATICAL MODELING

March, 2020

Modeling the movement of Pelagic fish stocks in North East Atlantic ocean for the next fifty years: Fisheries face the need to relocate themselves over time due to global warming, as fishes move away to colder temperatures. This model predicted their movement by analysing the rise in global and local temperatures as an effect of global warming and suggested relocation for small fisheries accordingly.

SUDOKUS AND GRAPH THEORY

SEMESTER LONG PROJECT

February - March, 2020

Interpreting a Sudoku as an NP Graph coloring problem, working through the Chromatic Polynomial and general Combinatorics to analyse the number of Sudoku puzzles and solutions that can be generated with varying number of clues.

ACHIEVEMENTS

Received **Honorable Mention** at 2020 COMAP's Mathematical Contest in Modeling (MCM). Only team from India to get Honorable Mention.

Secured **Air 2 (top 0.01%)** in Delhi University Entrance Test 2019.