

TANAV SINGH BAJAJ

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OBJECTIVE

My goal as a highly motivated BTech student is to pursue an academic path that will allow me to challenge myself, broaden my knowledge and skills, and make a meaningful contribution to the field of data science and research. I am excited to work with outstanding academics that have a wealth of experience and expertise, as well as cooperate with like-minded individuals who are motivated to attaining mutual goals.

EDUCATION

Indian Institute of Information Technology Bhopal
BTech Information Technology December 2020 - Present

Indian Institute of Technology Madras
Foundation in Data Science January 2021 - December 2021

Relevant Coursework

- Database Management Systems
- Advanced Engineering Maths
- Operating Systems
- Statistics for Data Science
- Soft Computing
- Data Structures and Algos

PUBLICATIONS

A Graph Embedding Approach for Deciphering the Longitudinal Associations of Global Mobility and COVID-19 Cases - Raghav Awasthi, Meet Modi, Hardik Dudeja, Tanav Bajaj, Shruti Rastogi, Tavpritesh Sethi

Pre-Print Link: <https://www.medrxiv.org/content/10.1101/2023.03.30.23287969v1>

Under Review AMIA 2023 Annual Symposium

RESEARCH EXPERIENCE

Indraprastha Institute of Information Technology June 2022-Present
Research Intern under Prof (Dr.) Tavpritesh Sethi

- Conducting community detection using graph analysis to identify clusters of high Covid transmission and movement across geographical locations and informing targeted public health policies.
- Developed a comprehensive data visualization dashboard for Meta (formerly Facebook), using Docker and ELK Stack to effectively analyze and present large datasets from National Family Health Survey and District Level Household Survey, showcasing skills in Docker and ELK Stack.
- Assisting in research on tabular gene data modeling using advanced techniques such as GANs, Gaussian Models and Bayesian models.
- Developed a SAAS using FastAPI for the research project, demonstrating proficiency in FastAPI and machine/deep learning algorithms.

Indian Institute of Information Technology, Bhopal November 2022-Present
Research Intern under Prof (Dr.) Bhupendra Singh Kirar

- Developed and implemented Neural Networks for the research paper, which involved utilizing convolutional neural networks and transfer learning techniques.
- Analyzed the performance of the classifier using various evaluation metrics, including accuracy and specificity, and presented the findings in the research paper.

PROFESSIONAL EXPERIENCE

HackerEarth June 2022-December 2022
Technical Content Engineer Intern (SQL, DevOps and ML)

- Demonstrated outstanding technical proficiency by reviewing 100% of the SQL, DevOps, and ML libraries, contributing 40% to the SQL library and 20% to the DevOps internal library by December 2022.
- Utilized expertise in database design to develop questions of varying levels of difficulty for 4 different types of databases, including MySQL, Postgresql, OracleDb, and MSSQL server. while also working with Bash scripts on a daily basis.
- Contributed significantly to the technical interview process by providing relevant, challenging, and effective questions that accurately assess candidates' skills and knowledge.

Applied Analytics May 2022-July 2022
Machine Learning Content Writer

- Partnered with an international client to deliver exceptional content on a range of Machine Learning topics, demonstrating my ability to effectively collaborate with diverse teams and stakeholders.

- Had a key role in the development of high-quality content, providing in-depth explanations and well-written sample code for various Machine Learning and Deep Learning algorithms, including regression, classification, and neural networks.

PROJECTS/ACHIEVEMENTS

WGAN-GP

March 2023

<https://github.com/tanav2202/WGAN-GP>

- Developed implementation of advanced WGAN-GP algorithm using TensorFlow for generating high-quality anime faces, addressing the common problem of mode collapse in GAN training.
- Successfully trained GAN model to produce diverse and realistic anime faces, demonstrating the effectiveness of the WGAN-GP algorithm for generating complex and varied images.

A Study on LSTM

February 2023

<https://github.com/tanav2202/A-Study-on-LSTM>

- Conducted a research project on the application of Long Short-Term Memory (LSTM) for stock prediction.
- Utilized Yahoo Finance API data to generate future predictions and visualizations for a chosen stock.

Graph Analysis on My LinkedIn

March 2023

<https://www.kaggle.com/code/tanavbajaj/graph-analysis-on-my-linkedin/notebook>

- Demonstrated expertise in network analysis by creating and visualizing a comprehensive LinkedIn connections graph using Python and NetworkX.
- Identified and leveraged insights from the graph's structure, including key companies and positions, to make informed strategic decisions and maximize the value of my professional network.

Kaggle Expert

June 2022

<https://www.kaggle.com/tanavbajaj>

- On my Kaggle profile, I have demonstrated my ability to analyze datasets and create effective solutions. My notebooks have been recognized with bronze medals, and I take pride in producing high-quality work.
- By leveraging my skills in exploratory data analysis and algorithm tutorials, I have established myself as a Kaggle expert, and I am committed to continuing to hone my skills in this field.

SKILLS

Mathematics:	Linear Algebra, Statistics, Probability, Calculus
Programming Languages:	Bash Scripts , Python, C++ ,R , MATLAB
Libraries/Frameworks:	Numpy , Pandas , Plotly/Dash , Sklearn , Tensorflow , PyTorch, Open CV
Database Management Systems:	SQL , MariaDb, MSSQL , OracleDb and PostgreSQL
Soft Skills:	Public Speaking, Leadership, Communication Skills

LEADERSHIP /EXTRA CURRICULAR

GNU/Linux Users Club

IIIT Bhopal

Founder and Mentor

September 2021 - Present

- Mentored new Linux users, resulting in 70% of '20-'24 batch actively using an Linux distribution, increasing adoption and promoting the use of open-source technologies.
- Organized various events and workshops to promote open-source software and encourage collaboration among members, fostering a supportive community of technology enthusiasts.

Google Developers Student Club

IIIT Bhopal

Management Lead

August 2021 - June 2022

- Planned and coordinated successful events, overseeing all aspects of event planning from conceptualization to execution.
- Collaborated with a team of conductors to ensure the smooth execution of all events, managing timelines and resolving issues in real-time.

Kratigence Club (ML/AI Club)

IIIT Bhopal

Head of Operations

November 2021 - August 2022

- Conducted webinars on the statistics behind machine learning algorithms, increasing understanding and interest in the field.
- Managed day-to-day operations and ensured the smooth functioning of the club, coordinating with other club members to achieve the club's objectives.

CERTIFICATES

Fundamentals of Deep Learning

NVIDIA 2022

Google Career Certificates (IT Support)

Google 2020

Diplomacy Award

World Federation of United Nations Association 2017

International Informatics Olympiad (Gold Medal) State Rank 3 and School Rank 1

Silver Zone 2017