ANSHUL GUPTA

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PERSONAL STATEMENT

Hi, I am Anshul & I love to learn new and intriguing tech-savvy things, besides working in interdisciplinary domains for social good. Currently, I am working on my Master Project here in Freiburg where we use semantic information from LLMs to make better foundation models.

RELEVANT EXPERIENCE

Machine Learning Lab, Freiburg, GER
Teaching Assistant, 01/2025 – Present
Working on course for AutoML Summer Semester 2025.

Research Assistant, 12/2023 – 12/2024
Making TabPFN accessible through a client-server architecture being used by Priorlabs.

Jungleworks, Clicklabs, Chandigarh, IND
Associate Software Engineer, 01/2022 – 09/2023
*Product Development and Optimization of **Tookan**.*
Notable Contributions: *40+ new Features on 7 Servers, SQL Query and Code Optimizations, MongoDB Versioning, Integrating Freshworks, Eliminating SQL Injection.*

BlazOP, San Francisco, US (Remote)
Software Engineering Intern, 08/2021 – 09/2021
*Utilized tools like **pyang, xmldiff, and Agile** techniques to get a comparative analysis of Yang Models.*

Panjab University, Chandigarh, IND
DIC, Research Intern, 04/2021 – 10/2021
Predictive Maintenance *for early prediction of faults in machines using Vibration Analysis.*

Deptartment of Biophysics, Molecular Dynamics Server Design and Data Mining Intern, 11/2020 – 06/2021
R&D for Peptide Utility Sequence Search Server [2]

PROJECT & SKILLS

Master Project: Text4TabPFN (ongoing).

AutoML Course: Bidirectional Iterative Mutation Hyperparameter Optimization (IMHO) with advanced preprocessing technique XPREBOOST improving baseline by **771.95%**.

Deep Learning Lab: Doubling TabPFN Inference Speed with Minimal Accuracy Loss and RAG Based Finetuning.

Deep Learning Module: Prediction of rent of a room developed from scratch without any third-party libraries.

Selected Skills:
Programming: Python (Pytorch/Numpy), C/C++
Databases: MySQL, MongoDB
Web Technologies: JavaScript, CSS, HTML, Django
Developer Tools: Git, NodeJS, GCP, VS Code, PyCharm, Colaboratory, Watson Studio

Certifications: ML with Python, Deep Learning Specialization, IBM Data Science Capstone, <u>view all here</u>

EDUCATION

Albert Ludwigs University of Freiburg, Freiburg, GER
Master of Science, Computer Science (Specialization in AI)
GPA: 1.7/1.0 (10/2023 – Present)
Relevant Courses: Deep Learning, Machine Learning, AutoML, Deep Learning Lab, Foundations of AI, Information Retrieval, High Throughput Data Analysis with Galaxy, Seminar AutoRL
Volunteering Roles: ICM Mentor Uni. Freiburg

Panjab University, Chandigarh, IND
Bachelor of Engineering, Computer Science
GPA: 1.2/1.0 (*summa cum Laude*) (08/2018 – 07/2022)
Bachelor Thesis: **Smart Transportation Systems using AI and IoT: A Modern Day Approach**
Volunteering Roles: CCET ACM Student Chapter Chairperson 2020-21, CCET Website Head 2020-21

AWARDS & HONORS

— Employee of Quarter, Jungleworks, 11/2022 – 01/2023
— Runners Up, Internal Hackathon Jungleworks, 2022
— Merit Scholar AY 2019/20, 2020/21, 2021/22
— Runners Up, UMLSC Project Evaluation, 2021
— Selected for ACM India Summer School in NLP, 2021
— Microsoft Technology Associate: Introduction to Programming Using Python, 2020
— Winner, Internal Skill India Hackathon, IIC, 2020

PUBLICATIONS

1. Evaluating the Sustainable COVID-19 Vaccination Framework of India Using Recurrent Neural Networks. Wireless Personal Communications (2023).
2. Peptide Utility (PU) search server: A new tool for peptide sequence search from multiple databases. Heliyon (2022).
3. Analysis & Prognosis of Sustainable Development Goals using Big Data-based Approach during COVID-19 Pandemic. Sustainable Technology and Entrepreneurship, Elsevier (2022).
4. An Inquisitive Prospect on the Shift Toward Online Media, Before, During, and After the COVID-19 Pandemic: A Technological Analysis. Advances in Data Computing, Communication and Security. Springer Singapore (2022).
5. A novel Smart Transportation based framework interlinking the advancements in Technology and System Engineering. Workshop Proceedings of International Conference on Smart Systems and Advanced Computing, CEUR Workshop Proceedings (2022)
6. An Exploratory Analysis on the Unfold of Fake News During COVID-19 Pandemic. Smart Systems: Innovations in Computing, Springer Singapore (2022).
7. Predicting Catastrophic Events Using Machine Learning Models For Natural Language Processing. Data Mining Approaches for Big Data and Sentiment Analysis in Social Media (2021)
8. An Investigative Study Into The Impact Of Artificial Intelligence And Internet Of Things In Modern Times And Hereafter. AAP CRC Press, Taylor & Francis Group (2021).

Last Updated: February 27, 2025