Khushi Gupta

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EDUCATION

Amity University Noida, Uttar Pradesh **July 2022 - June 2026**
B. Tech. Bioinformatics , Minor in Data Science
CGPA- 8.0

Delhi Public School **High School**
10th - 80%
12th – 76%

SKILLS

Programming Languages: Python, SQL, R
Tools & Technologies: Bioinformatics, Data Science, Data Analysis, Machine Learning, Data mining.
Data Visualization: Matplotlib, Seaborn, Plotly, ggplot2, HoloViews, Pandas Visualization, Geopandas, and Pygal.

Bioinformatics Tools and Software: OmicsBox, KEGG Mapper, Reactome, UniProt, PANTHER, STRING, BioCyc, Gene Ontology (GO), MetaboAnalyst, DAVID, Galaxy, Cytoscape, Bioconductor, ToppGene Suite, Enrichr.

Soft Skills & Coordination: Communication, teamwork, problem-solving, organizational skills, event planning, public speaking, Leading activities, organizing events, project management. Corporate communication, Anchoring.

WORK EXPERIENCE

Praedictio - The Bioinformatics Club

Vice President, Praedictio - The Bioinformatics Club **July 2024 - Present**

- Lead strategic planning and decision-making for club initiatives and activities.
- Mentor and support club members in their professional development and bioinformatics interests.

Anchor and Coordinator **Oct 2023 – July 2024**

- Leading club activities and engaging members through events and discussions.
- Organizing and hosting webinars, workshops, and interactive sessions.

Computational Genomics lab **May 2023 - July 2023**
Summer Intern

- Conducted literature reviews on spore infection, vascular invasion, and mucormycosis species.
- Performed gene name and pathway analysis using KEGG and Reactome databases.
- Conducted Gene Ontology (GO) enrichment and InterPro ID analysis.
- Utilized OmicsBox for GO mapping and pathway construction.
- Leveraged STRING for protein-protein interaction analysis.

PUBLICATIONS AND PROJECTS

1. "Machine Learning-Based Approaches for Vaccine Target Identification: Implementation and Insights" This study involved extensive data analysis on large-scale datasets, employing multiple machine learning algorithms, including PyTorch, TensorFlow, and Scikit-Learn, to develop a predictive model. DOI.

2. Multi-Armed Bandit Recommendation System: Developed a recommendation system using the Multi-Armed Bandit algorithm to optimize video recommendations based on user interactions. Developed in Python, the system dynamically learns and adapts to user preferences, enhancing content recommendations for improved user satisfaction. GitHub Repository

3. NLP based Sentiment Analysis: Developed an NLP - based sentiment analysis pipeline to analyze customer chat data. The project involves preprocessing text data, performing sentiment analysis, and visualizing results using Python, Pandas, NLTK, TextBlob, Matplotlib, Seaborn.This project is directly relevant to e-commerce as it can be used to improve customer satisfaction GitHUb Repository.

4.Exploring Metabolic Pathways Implicated in Antifungal Drug Resistance

Utilized genomic and transcriptomic data to perform pathway enrichment analysis, employing tools such as KEGG and Reactome. Implemented differential gene expression analysis and metabolic network modeling to identify key enzymes and metabolites implicated in resistance mechanisms. The project aimed to delineate potential molecular targets for therapeutic intervention and enhance understanding of resistance development.

CERTIFICATIONS

1. Python for Data Science - IITKP
2. Introduction To Machine Learning - IITKGP
3. Data Science for Engineers – IITKP NPTEL
4. Soft Skill Development

Extracurricular Activities

1. *Sponsorship Team Coordinato* -Secured sponsorships by engaging with managers and HR representatives from multiple companies. Conducted meetings to present and negotiate sponsorship deals.

2. Organizer, Bioinformatics Hackathon ('BIO-COD-@-THON'), Amity University – Led a university-wide hackathon focused on bioinformatics, genomics, and healthcare innovations. Organizer, 'BioGlympse – Final Competition' – Managed a university-level data analysis and coding competition
3. Group Project Lead, Consensus Decision-Making Activity – Led a team in addressing social issues like anxiety, depression, and cybersecurity, developing solutions through collaborative effort.
4. Participant, NGO Volunteering Program – Completed 60 hours of service, focusing on community health and education initiatives.