Rishabh Pandey

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EDUCATION

Northeastern University, Boston, MA Dec. 2024
Master of Science in Bioinformatics GPA: 3.34
Concentration: Data Science/Data Analytics

Ramaiah University of Applied Sciences, Bangalore, India Aug. 2021
Bachelor Of Science Biotechnology (Hons) GPA: 8.90
***Honors*:** Top 10 Rankers in the Department

EXPERIENCE

Computational Drug Discovery with CNN using QSAR modelling, Bangalore, India May 2021 – Jul. 2021
Full Stack Developer: Python

- Leveraging AI to predict Acetylcholinesterase activity holds immense potential for the treatment of Alzheimer's disease. With the aim to revolutionize the field.
- By developing a ChEMBL database-powered web app that predicts the bioactivity of target molecules by applying Convolutional Neural Network (CNN) and Quantitative Structure-Activity Relationship (QSAR) modeling.
- Furthermore, by harnessing Canonical SMILES notations to accurately calculate Lipinski descriptors, which are critical in evaluating the drug likeness of compounds based on their pharmacokinetic profile, including absorption, distribution, metabolism, and excretion.
- GitHub link for the project

CF-CAP (Computational Flu or COVID-19 Anticipator and Prescriber), Raipur/Bangalore, India Oct. 2020 – April 2021
Data Scientist, Front End Developer: Python, JavaScript

- As the first line of defense against COVID-19, CF-CAP is revolutionizing the way we detect and manage the initial symptoms.
- We leveraged the power of X-ray imaging and Convolutional Neural Network (CNN) models to design a web-app that accurately predicts the presence of COVID-19 in the lungs.
- With an impressive on-paper accuracy of 90%, our CF-CAP model was trained with over 16,000 image samples using VGG16 architecture and optimized with 50 epoch cycles.
- The impact of our work was further highlighted in a national newspaper, "Patrika," where it was featured under the national news section, reinforcing its significance in the fight against COVID-19
- GitHub link for the project
- Link for the article

FULL STACK WEB DEVELOPER – IISc, Bangalore, India May 2021 – Jun. 2021
Intern: - Ruby on Rails

- As a Full-stack Web Developer at the Department of Computational and Data Science at the Indian Institute of Science's ATGC Lab, my task was to utilize the Ruby on Rails framework to drive powerful web solutions.
- By taking the initiative to build a comprehensive relational database from the ground up, ensuring that the website was equipped with all the necessary features and hosted seamlessly.

TECHNICAL SKILLS

Data Science and Machine Learning: Data Visualization in Seaborn, Matplotlib, MySQL, PostgreSQL, Microsoft SQL Server, Sklearn, TensorFlow & Keras, Jupyter, Numpy, Pandas.
Computer Science: Full Stack Web Development using MERN Stack with React, Flask and Django, Linux, REST API.
Languages: Python, JavaScript, SQL, C, Bash, R, MATLAB, (S)CSS, HTML5
Bioinformatics Tools: Trimmomatic, GSNAP, BLAST, SAM tools, Trinity, BLAST+
Interpersonal Skill: Leadership with Critical thinking, public speaking and presentation, problem solving skills, project management
Wet Lab Skills: Biosafety cabinet (Level 2), Gel electrophoresis, PCR, MTT assay, Immunological Assays, Plant callus culture, Animal tissue culture.

SEMINAR AND WORKSHOPS

Application of computational tools in drug discovery: Learned about Data Visualization and processing data and how ML/AI can be used when it comes to prediction of a drug and drug likeness of a compound