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

- The inhibition of Acetylcholinesterase is a lucrative therapeutic strategy for the treatment of Alzheimer's disease and using AI we can predict the enzyme that catalyzes the breakdown of the neurotransmitter acetylcholine that is essential for cognition and memory.
- Using ChEMBL database developed web app that predicts bioactivity (pIC50) of the target molecule by CNN using QSAR modelling of protein Acetylcholinesterase
- Canonical smiles notations were used to calculate Lipinski descriptors, used in the interpretation of drug likeness of the compounds based on their pharmacokinetic profile that is 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

- CF-CAP provides first line of aid for the initial symptoms of COVID-19; Using X-ray of lungs to find traces of coronavirus in the lungs using CNN model by designing a web-app with a VG16 model to predict presence of COVID.
- CF-CAP had an on-paper accuracy of 90\% that was trained with over 16,000 image samples with epoch cycles of 50 using VGG16 architecture.
- Serving its purpose, this project was highlighted in a top tier national newspaper, "Patrika." under the national news
- GitHub link for the project
- Link for the article

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

- Worked as a Full-stack web developer in Department of Computational and Data Science, Indian Institute of Science, in ATGC lab using Ruby on Rails framework.
- Created a relational database from scratch for the website and hosted it with all the features that was required

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