Rishabh Pandey

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EDUCATION

Northeastern University, Boston, MA Dec. 2024
Master of Science in Bioinformatics GPA: 3.7
Area of Interest: Data Science/Data Analytics

Ramaiah University of Applied Sciences, Bangalore, India Aug. 2021
Bachelor Of Science Biotechnology (Hons) GPA: 3.7
***Honors*:** Top 10 Rankers in the Department

SKILLS

Data Science and Machine Learning: Data Visualization in Seaborn, Matplotlib, MySQL , Sklearn, TensorFlow & Keras, Jupyter, Numpy, Pandas.

Computer Science: Full Stack Development, Cloud Native Operations, Kubernetes, 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.

EXPERIENCE

Intern – Harvard Medical School – Mass General Hospital, Boston, MA June 2023 – Aug 2023
Developer: - Python

- Developed a script using MD5 hash algorithm to efficiently clean up duplicates on server and optimize storage space utilization. Made a pip module for better distribution – pip install filelistener
- Taking the initiative to build and deploy a Kubernetes cluster, enabling efficient containerized application deployment and management

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

- Leveraged AI to predict Acetylcholinesterase activity holds immense potential for the treatment of Alzheimer's disease. With the aim to revolutionize the field.
- Developed a ChEMBL database-powered web app that predicts the bioactivity of target molecules by applying Deep Neural Network and Quantitative Structure-Activity Relationship (QSAR) modeling.
- Harnessed 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.
- 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.
- 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.
- 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

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