Piyus Mohanty

piyus22.pm@gmail.com| LinkedIn| Github| Portfolio|+1 (470)-838-2429

EDUCATION

Georgia Institute of Technology, Atlanta, USA **Aug 2021 – Dec 2022**

Master's in Bioinformatics

Coursework: Machine Learning in Computational Biology, Experimental Design and Statistics, Intro to Database Systems, Genomics and Applied Bioinformatics

Graduate Student Researcher –Bioinfo-Biomedical lab, Kamaleswaran Lab, Emory University, GA

COMPUTATIONAL SKILLS

Programming Language & Frameworks: Python, R, SQL(Postgres, MySQL), NodeJS, React, Javascript, HTML, CSS, Perl, shell scripting, JMP(Statistical tool), AWS, Gcloud, BigQuery, GitHub, Kraken, Flask, Django

PROFESSIONAL EXPERIENCE

Tempus AI, Chicago **Jan 2023 – Current**

R&D BI Analyst 2

- Applied advanced data science techniques to drive innovation in R&D, specializing in NGS data analysis. Developed and automated bioinformatics pipelines, conducted feasibility studies, and performed post-sequencing impact analysis. Leveraged strong skills in data curation, cleaning, and analysis, statistical modeling (including hypothesis testing), and data visualization to optimize lab and business processes. Designed experiments with a focus on power analysis and served as the lead data analyst for the Early Research section, delivering data-driven insights to stakeholders

Q^2 Solutions, North Carolina **May 2022 – Aug 2022**

Bioinformatics Intern

CNV Bakeoff Algorithm (Docker, Nextflow, R, Python, Perl) May 2022 – Present

- Evaluated the recall, precision and computational resources needed of various CNV calling applications in whole exome sequencing and whole genome sequencing. Based on that selected the optimal tools and integrated it with the other offerings offered by Q^2 Solutions.

Demultiplexing (Python, R) May 2022- Present

- Worked on identifying and using various tools for demultiplexing of pooled single cell samples based on variants. Performance of the tools that had been shortlisted was evaluated for the doublet range of 1-20%. Which in turn will reduce the barcoding cost and help identify variants and cell subtypes.

Emory University, Atlanta **Sept 2021 – Sept 2022**

Machine Learning Intern (GRA) & worked for commercial offerings team by Emory University

ePFR (R, Python) **Published article* **Jan 2022 – May 2022**

- Designed and Implemented algorithm for an improved hypoxemia detection and to model its risks and disparities, joint collaboration project between Emory and UVA. The resultant measure had a better construct validity.[Link]

PROJECTS

Pharm- Care(Python and Flask) **Sept 2022 – Jan 2023**

- **Web Server** which uses **Pharmacogenomic** based information to predict the usage and the recommendation associated with the drug based on users WGS report. Uses PyPGx to make these predictions [Link]

NGS- Based Web Server (Python and React) Feb 2022 – May 2022

- NGS based web server which accomplishes the entire pipeline of best tools for Genome Assembly, Prediction, functional annotation and Comparative Genomics for ***Listeria monocytogenes***. [Link]

PSNMV - Predicting Sepsis Patients' Need for Mechanical Ventilation **Aug 2021 – June 2022**

- Using patient data from Emory ICU, a Deep Learning based model was built for the prediction of Mechanical ventilation in turn improving health care.

EXPRED (Python, Python-Flask, R) **Nov 2019 – Jun 2020**

- Built a ML based web server for the identification of expansin proteins with sequence information as input. Have tested several ML models such as SVM, Random forest, LGBM, Ada Boost Classifier and several other models. The resultant SVM model can predict expansin protein with **91% accuracy**. [Link]

HOBD (HTML, CSS, SQL, Javascript) **Mar 2019 – May 2020**

- Designed web page and database for HOBD, which provides metagenomics information related to four different cancers - Breast, Colorectal, Oral and Liver. Also includes all the studies associated with these cancers.[Link]

PUBLICATIONS & ACHIEVEMENTS

- Book Chapter – ***ML in Translational Bioinformatics*** published in Elsevier journal [Link]
- Awarded **Gold medal** & **Certificate of Merit** for graduating in the **top 1%** of the batch (Bachelors)