RAKESH INDUKURI

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SUMMARY

Highly motivated and dedicated bioinformatics graduate student with a strong skill set in fundamental programming concepts, data analysis, genomics, tech and a passion for learning and working on creative projects in areas of bioinformatics such as Functional Genomics, proteomics, single cell analysis, personalized medicine etc… Seeking a teaching assistant role to contribute to students' learning and growth in the field.

EDUCATION

Masters in Bioinformatics **Sep 2022 - Apr 2024 (Expected)**
Northeastern University, Boston, MA GPA: 4.00/4.00
Related Coursework: Bioinfo Methods-1 and 2, Statistics for Bioinformatics, Bioinformatics Programming

Bachelor of Technology in Bioinformatics **Aug 2021**
Sathyabama Institute of Science and Technology, INDIA GPA: 9.72/10.00
- Dr. Remibai Jeppiaar Scholarship for academic excellence 2017, 2018

Related Coursework: Structural Bioinformatics, Biological Sequence Analysis, Gene Expression and Microarray, Machine Learning

TECHNICAL SKILLS

Programming Languages & Tech: Python (Scientific Programming, Software development, Algorithms), R Language (Statistics and Data visualization), Git, APIs, Basic knowledge in SQL, Data science pipeline (cleansing, wrangling, visualization, modeling, interpretation), HTML, CSS, Hypothesis testing, Excel
Bioinformatics tools: BLAST, FASTA, Bowtie2, Samtools, Trinity, DESeq, NGS analysis and workflow, Mainstream Bioinformatics databases for genomics and proteomics, Molecular visualization tools like PyMol, Gromacs
Operating Systems: Mac, Linux, Windows
Bioinformatics Skills: Scripts to query bioinformatics databases such as NCBI, Automate BLAST searches, automate data retrieval and many basic bioinformatics tasks, parse various bioinformatics file formats, Analyze various types of biological datasets (tabs and images), Regular expressions, Sequence Analysis, Genome assembly, Transcriptome assembly

PROJECTS

PROJECT: Genomic Data Analytics in Parkinson's Disease **Jan 2021 - Apr 2021**
- Developed a workflow and Evaluated impact of SNPs on 3 genes (SNCA, LRRK2, PARK7)
- Predicted effects of non-reported mutations utilizing homology models and structural analysis
- Identified potentially harmful variants through stability studies and data analysis

STUDY: Effect of various mutations on NFV specific PI inhibitor drug resistance. **Sep 2019**
- Explored drug resistance patterns in specific protease inhibitor mutations of Nelfinavir
- Utilized advanced algorithms such as fuzzy logic and neural networks
- Examined data to identify trends and insights and presented findings as a poster

PROJECT: In Silico Screening, Molecular Docking, and Pharmacophore Analysis of Phytochemicals against BRCA1 and BRCA2. **Aug 2019 - Dec 2019**
- Screened and reviewed compounds to identify lead with high potential for binding/docking
- Designed new structures using chemsketch to enhance lead compound's potential
- Evaluated potential of phytochemicals as therapeutic agents using in silico docking and pharmacophore analysis on BRCA1 and BRCA2

More Projects

EXPERIENCE - Organizing & Volunteer:

- **Graduate Biotech and Bioinformatics Association (GBBA)** [Graduate Club at Northeastern University, 2023-24]: **Vice President - Bioinformatics** (also volunteered to teach in a Genome assembly fundamentals workshop previously)
- **Volunteer - CTBR 2019** [Sathyabama, 6 Feb 2019 – 8 Feb 2019]: National workshop on Computational tools in Biomolecular Research, **Workshop tutor**: Responsible for teaching about tools to life science students & wet-lab scientists.
- **LEAD TALKS** [Sathyabama, Apr 2019]: Gave a talk on importance of "Gut microbiome and p53" to live audience
- **Organiser - CBMH 19** [Sathyabama, Sep 2019]: National conference on "Computational Biology & Medical Biotechnology in healthcare"
- **Entrepreneurship Development Club** [Sathyabama Institute of Science and Technology**,** June 2020 to April 2021]: Office-bearer for Entrepreneurship Development Club. Responsibilities: Technical, Training, HR and documentation team.