Tamalika Das

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SUMMARY

Passionate bioinformatician with a strong focus on single-cell transcriptomics. Proficient in bioinformatics tools, programming, and data analysis. Excellent problem-solving, research, and collaboration skills. Seeking a challenging role in cancer research to apply computational biology expertise and advance scientific discovery.

SKILLS

Programming Languages: Python, R, C

Computational Biology: Genomics and Proteomics, Systems Biology, Structural Bio-informatics

Libraries & Tools: Seurat, Scanpy, Celloracle, Biopython

PROJECTS

Co-expression Network June 2024–July 2024

Single-cell transcriptomics *R*

- Identified and evaluated a suitable tool for constructing single-cell co-expression networks, focusing on its capabilities and user-friendliness for biological data analysis.
- Successfully ran the selected tool on provided sample single-cell RNA-seq datasets, gaining hands-on experience with the workflow and output interpretation.
- Applied the co-expression network tool to initial datasets from my research, conducting preliminary analysis to assess network structure and potential gene relationships.

Gene Regulatory Network November 2023 – June 2024

Single-cell transcriptomics *Python*

- Analyzed a single-cell RNA-seq dataset of PBMCs and identified eight distinct cell types and constructed GRNs for all cell types.
- Analyzed the network topology of megakaryocytes and identified EP300 as a key gene.
- Performed an in-silico knockout experiment to investigate EP300's functional significance which revealed that the absence of EP300 disrupts normal megakaryocyte development.

RESEARCH EXPERIENCE

Masters Dissertation Student November 2023 – June 2024

Quantitative and Systems Biology Lab *MMV, BHU*

Project Supervisor: Dr. Rakesh Pandey

Project: Construction of Gene Regulatory Networks and In-Silico Perturbation Analysis using Single-Cell RNA-seq Data of Peripheral Blood Mononuclear Cells

Summer Intern June 2024 – July 2024

Quantitative and Systems Biology Lab *MMV,BHU*

Project Supervisor: Dr. Rakesh Pandey

Project: Construction of Co-expression Networks usingSingle-Cell RNA-seq Data of Chronic Myeloid Leukemia

EDUCATION

Banaras Hindu University Varanasi, India

M.Sc. in Bioinformatics *Nov 2022 – June 2024*

Lady Brabourne College Kolkata, India

B.Sc. in Microbiology *July 2019 – September 2022*

Final Grade : 8.294