Tamalika Das

tamalikadas1810@gmail.com | www.linkedin.com/in/tamalika-das | github.com/Tamalikaaa18

EDUCATION

Banaras Hindu University — Varanasi, India
M.Sc. in Bioinformatics — *Nov 2022 – June 2024*

University of Calcutta — Kolkata, India
B.Sc. in Microbiology — *July 2019 – September 2022*
Final Grade : 8.294

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

SKILLS

Programming Languages: Python, R, C.

Skills: Data Analysis, Data Management, Data Visualisation, Programming, Biostatistics.

Libraries & Tools: Seurat, Scanpy, Celloracle, Biopython.

ACADEMIC ACHIEVEMENTS

- CUET-PG (2022) - AIR 2