Bobby Ranjan

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| **Education** European Molecular Biology Laboratory (EMBL) Rome, ItalyPredoctoral Fellow September 2021 - PresentSupervisor: Jamie HackettNanyang Technological University (NTU) SingaporeMinistry of Education Tuition Grant RecipientBachelor of Engineering (Computer Engineering) Graduated in June 2018Minor in EntrepreneurshipMinor in Life Sciences **GPA**: 4.60/5.00 Vikhe Patil Memorial School Pune, Maharashtra, IndiaGrade 12 | CBSE Board Examinations (A-level equivalent) Graduated in May 2014 **School Rank 1 with 96.8%**  **Selected Publications** Argaw-Denboba, A., Schmidt T.S.B., ..., **Ranjan, B.**, ..., Hackett, J.A. “Paternal microbiome perturbations impact offspring fitness.” *Nature* (In Revision)**Ranjan, B.**, Sun W., Park J., Xie R., Mishra K., Schmidt, F., … & Prabhakar S. (2021).  DUBStepR is a scalable correlation-based feature selection method for accurately clustering single-cell data. *Nature Communications* **12**, 5849.  * + Received **ISMB Fellowship award** for presenting DUBStepRat ISMB (virtual) in June 2020.   + Selected for **flash talk** at Human Cell Atlas Asia (virtual) in October 2020.  Schmidt, F.\*, **Ranjan, B.\***, Lin Q.X.X., Krishnan V., Joanito I., ... & Prabhakar S. (2021).  RCA2: a scalable supervised clustering algorithm that reduces batch effects in scRNA-seq data. *Nucleic Acids Research*.**Ranjan, B.\***, Schmidt, F.\*, Sun, W., Park, J., Honardoost, M. A., Tan, J., ... & Prabhakar, S. (2021). scConsensus: combining supervised and unsupervised clustering for cell type identification in single-cell RNA sequencing data. *BMC Bioinformatics*, 22(1), 1-15.  * + Received **ISMB Fellowship award** for presenting scConsensus at ISMB (virtual) in June 2021.   + Selected for **flash talk** at Single Cell Analyses Meeting, CSHL in November 2019.  Lee, H. O.\*, Hong, Y.\*, Etlioglu, H. E.\*, Cho, Y. B.\*, …, **Ranjan, B.**, ... & Park, W. Y. (2020).  Lineage-dependent gene expression programs influence the immune landscape of colorectal cancer. *Nature Genetics*, 1-10.**Ranjan, B.**, Chong, K. H., & Zheng, J. (2018). Composite mathematical modeling of calcium signalling behind neuronal cell death in Alzheimer’s disease. *BMC systems biology*, *12*(1), 10.  * + Selected for **talk** at Asia-Pacific Bioinformatics Conference in April 2018   **Achievements & Awards** **ISMB 2021 Fellowship Award|** International Society for Computational Biology | June 2021**ISMB 2020 Fellowship Award|** International Society for Computational Biology | June 2020**Top 8 & Most Socially Useful Award|** NUS Hack & Roll 2018 | January 2018**People’s Choice Award |** NUS Hack & Roll 2017 | January 2017**President’s Research Scholar |** NTU | August 2015**Best Freshmen Award |** NUS Hack & Roll 2015 | January 2015**All India Rank 1820 |** IIT JEE Advanced (India) | May 2014**All India Rank 3 scoring 98.2%|** ICSE Board (O-level equivalent) | May 2012 **Experience** **Bioinformatics Specialist | Genome Institute of Singapore** SingaporeAugust 2018 – July 2021 Group Leader: Shyam Prabhakar   * Led/co-led development of 3 new software approaches to improve clustering for cell type identification in single-cell RNA sequencing (scRNA-seq) data * Analyzed multiple scRNA-seq datasets from cancer and autoimmune patient samples  **Software Design Engineer Intern | BitTitan** SingaporeMay 2017 – August 2017  * Built customer-facing license consumption report for all BitTitan products * Conducted tech feasibility analysis to improve BitTitan’s reporting capacity * Built code analysis tool to clean up database references across codebase   **Technology Analyst Intern | Bank of America, Merrill Lynch** Singapore  August 2016 – December 2016   * Used message queues to improve efficiency of payment processing system * Built a proof-of-concept (POC) to help onboard new testers onto platform   **Skills**   * **Data Analysis:** Transcriptomics • Metabolomics • Machine Learning * **Computer Science:** R • Python • Java • Web dev (HTML5, CSS3, JS) * **Lab Techniques:**  Animal Handling • FACS   **Hobbies & Interests**  Science Communication • Football • Table Tennis • Music  **Other Activities** **Project Officer | Stronghold Diagnostics Labs (SDL) [COVID-19 Testing Facility]**July 2020 – October 2020 | Singapore  * Assisted in submission of daily clinical reports for SDL * Performed software integration testing for automated clinical reporting * Developed visualization tools for staff members to communicate and receive updates  **Website Manager | PGMedOnline.com**January 2018 – June 2021 | India  * PGMedOnline is a home-based coaching website for all medical examinations * My responsibilities involve regular website maintenance and liaison with website developers |