

Bobby Ranjan

+39 351 948 1408 | bbbranjan@gmail.com | <https://www.bobbyranjan.com>

Education

European Molecular Biology Laboratory (EMBL)

Predoctoral Fellow

Supervisor: Jamie Hackett

Rome, Italy

September 2021 to Present

Nanyang Technological University (NTU)

Ministry of Education Tuition Grant Recipient

Bachelor of Engineering (Computer Engineering)

Minor in Entrepreneurship

Minor in Life Sciences

GPA: 4.60/5.00

Singapore

Graduated in June 2018

Vikhe Patil Memorial School

Grade 12 | CBSE Board Examinations (A-level equivalent)

School Rank 1 with 96.8%

Pune, Maharashtra, India

Graduated in May 2014

Selected Publications

- Argaw-Denboba, A., Schmidt T.S.B., ..., **Ranjan, B.**, ..., Hackett, J.A. (2024). Paternal microbiome perturbations impact offspring fitness. *Nature*: 1-8.
- **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 DUBStepR at 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 Singapore
August 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 Singapore
May 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

Teaching • Science Communication

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