Yangyang Li

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Self-introduction

I am intensely interested in the data-driven domains including classic machine learning and deep learning. I am also an engineer and I am mainly working on developing algorithms and software to handle complex problems in the field of Computational Biology

Education

Northwestern University Chicago, US
Ph.D in Bioinformatics *June 2022 – present*

University of Minnesota Minnesota, US
Ph.D. in Bioinformatics and Computational Biology *Sep. 2020 – June 2022*

China Agricultural University Beijing, CN
Master in Crop Bioinformatics *Sep. 2018 – June 2020*

Northeast Agricultural University Harbin, CN
Bachelor of Arts in Agronomy *Sep. 2014 – June 2018*

Research Experience and Project

Northwestern University Chicago, US
Ph.D. in Bioinformatics domain *Sep. 2022 – Present*

- Develop algorithm and deep generative model to emulate long-read sequencer
- Develop algorithm and tools to map gene fusion to structure variations of genomics
- Develop graph algorithm and tool to detect non-linear transcript in long read data

University of Minnesota Minnesota, US
Ph.D. in Bioinformatics and Computational Biology *Sep. 2020 – Present*

- Develop algorithm to detect non-linear structure variations in transcriptome
- Compare the performance of current tools used to detect alternative splicing variants

China Agricultural University Beijing, CN
Master in Crop Bioinformatics *Sep. 2018 – June 2020*

- Dissection of 1,400 genomics data, extracted from eight maize populations. I adapt the bin map method to construct high-density genetic maps suitable for QTL mapping and detection, which regulate multiple, important agronomical traits.
- Conducting Genome-Wide Association Analysis (GWAS) to determine the association between SNPs and maize ear traits in 450 natural populations.

Technical Skills

Languages and Frameworks: C/C++, Rust, Python, R, Pytorch, Jax
Developer Tools: Neovim, Git, Docker, TravisCI, Linux, Gcc, Clang
Specializations: Algorithm Development, Concurrency Programming, Data Analysis and Visualization, Natural Language Processing

Grants and Honors

- Second Prize of Academic Scholarship (2019)
- Agricultural Scholarship (2016)
- Encouragement Scholarship (2014)

Conference talk

- The 7th Mathematical, Computer and Life Sciences Interdisciplinary Young Scholars Forum

Publications

Fry, J., **Li, Yangyang**, & Yang, R. (2022, 09). ScanExitronLR: characterization and quantification of exitron splicing events in long-read RNA-seq data. *Bioinformatics*. Retrieved from `https://doi.org/10.1093/bioinformatics/btac626`