

Curriculum Vitae

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Skill Sets

1. *Deep Learning (Pytorch, Tensorflow, Keras) and probabilistic modeling*
2. *Single-Cell Multimodal analysis (scRNA-Seq, CITE-Seq, scATAC-Seq, TCR, Spatial)*
3. *Neoantigen pipeline, Immune Repertoire, Cancer Immunotherapy*
4. *Gene Regulatory Network, Splicing Regulatory Network* [[Poster](#)]
5. *Web development (HTML, CSS, JavaScript, Flask, Dash, MySQL)*. [[Demo1](#), [Demo2](#), [Code1](#), [Code2](#)]
6. *Python, Linux, R, Matlab, C, Data Visualization*. [[Tutorials authored by me](#), [Code](#)]
7. *Code Documentation* [[Example1](#), [Example2](#)]
8. *Docker, Singularity* [[Example1](#), [Example2](#)]
9. *Quick and continual Learner*.

Education

08/2019 - present PhD student, Division of Biomedical Informatics
Cincinnati Children's Hospital Medical Center, United States

09/2018 - 04/2019 Exchange Student, Biodesign Institute
Arizona State University, United States

09/2015 - 06/2019 Bachelor of Science, Division of Life Science
Wuhan University, China

Working Experience

05/2022 - 08/2022 Bioinformatics Intern, Sanofi, Cambridge, MA, United States

- Evaluating spatial deconvolution methods on 10x Visium data to guide the drug target selection and validation
- Developing standardized spatial analysis framework on AWS server to support bench scientists analysis

03/2017 - 06/2017 Research Intern, Beijing Genome Institute (BGI), Shenzhen, China

- Participating cancer vaccine development using in-vitro T cell assays
- Analyzing single-cell data to generate novel hypothesis in tumorigenesis

First-Author Publications

1. **Guangyuan Li***, Balaji Iyer, V.B. Surya Prasath, YiZhao Ni, Nathan Salomonis. 2021. "DeepImmuno: Deep Learning-Empowered Prediction and Generation of Immunogenic Peptides for T-Cell Immunity." *Briefings in Bioinformatics* 22 (6). <https://doi.org/10.1093/bib/bbab160>.
2. **Guangyuan Li***, Baobao Song, Harinder Singh, V.B. Surya Prasath, H. Leighton Grimes, Nathan Salomonis. 2022. "Decision level integration of unimodal and multimodal single cell data with scTriangulate" *Nature Communications* 14. <https://doi.org/10.1038/s41467-023-36016-y>
3. **Guangyuan Li***, Anukana Bhattacharjee, Nathan Salomonis. 2023 "Quantifying Tumor Specificity Using Bayesian Probabilistic Modeling for Drug Target Discovery and Prioritization." *BioRxiv*. <https://www.biorxiv.org/content/10.1101/2023.03.03.530994v1>
4. **Guangyuan Li***, Nathan Salomonis. 2022. "SNAF: Accurate and Compatible Computational Framework for Identifying Splicing Derived Neoantigens." *Cancer Research* 82 (12_Supplemental). <https://doi.org/10.1158/1538-7445.AM2022-1898>
5. **Guangyuan Li***, Amir Bayegan, Joon Sang Lee, Donald Jackson, Jack Pollard. 2022. "Evaluating diverse deconvolution methods for tumor spatial transcriptomic datasets." *Journal for ImmunoTherapy of Cancer* 2022;10 <https://doi.org/10.1136/jitc-2022-SITC2022.0926>

Collaborative Publications

6. Minzhe Guo, Michael P. Morley, Cheng Jiang, Yixin Wu, **Guangyuan Li**, Yina Du, Shuyang Zhao et al. 2023. "Guided Construction of Single cell Reference for Human and Mouse Lung." *Nature Communications* 14 (1): 1-20. <https://www.nature.com/articles/s41467-023-40173-5>
7. Kang Jin, Daniel Schnell, **Guangyuan Li**, Nathan Salomonis, V.B. Surya Prasath, Rhonda Szczesniak, Bruce J. Aronow. "CellDrift: Inferring Perturbation Responses in Temporally-Sampled Single Cell Data." *Briefing in Bioinformatics*. <https://doi.org/10.1093/bib/bbac324>