## **Curriculum Vitae**

Name Guangyuan(Frank) Li

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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 - 08/2023 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**

09/2023 - present Postdoctoral Researcher, New York University, New York, NY, United States

• Developing next generation peptide-centric CAR-T therapy (PC-CAR)

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

# **First-Author Publications**

- 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\***, Shweta Mahajan\*, Siyuan Ma, Erin D. Jeffery, Xuan Zhang, Anukana Bhattacharjee, Meenakshi Venkatashubramanian et al. 2024. "Splicing Neoantigen Discovery with SNAF Reveals Shared Targets for Cancer Immunotherapy." *Science Translational Medicine* January. <a href="https://doi.org/10.1126/scitranslmed.ade2886">https://doi.org/10.1126/scitranslmed.ade2886</a>.
- 4. **Guangyuan Li\***, Anukana Bhattacharjee, Nathan Salomonis. 2023 "Quantifying Tumor Specificity Using Bayesian Probabilistic Modeling for Drug Target Discovery and Prioritization." BioRxiv. <a href="https://www.biorxiv.org/content/10.1101/2023.03.03.530994v1">https://www.biorxiv.org/content/10.1101/2023.03.03.530994v1</a>
- 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 <a href="https://doi.org/10.1136/jitc-2022-SITC2022.0926">https://doi.org/10.1136/jitc-2022-SITC2022.0926</a>

### **Collaborative Publications**

- Minzhe Guo, Michael P. Morley, Cheng Jiang, Yixin Wu, <u>Guangyuan Li</u>, Yina Du, Shuyang Zhao et al. 2023. "Guided Construction of Single cell Reference for Human and Mouse Lung." *Nature Communications* 14 (1): 1-20. <a href="https://www.nature.com/articles/s41467-023-40173-5">https://www.nature.com/articles/s41467-023-40173-5</a>
- Kang Jin, Daniel Schnell, <u>Guangyuan Li</u>, 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