gokul gowri

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education

Ph. D. in progress, Systems, Synthetic, and Quantitative Biology, Harvard, 2020 - present.
advised by Peng Yin

B.S. Bioengineering, Caltech, 2020.
advised by Erik Winfree and Lulu Qian

papers

Approximating mutual information of high-dimensional variables using learned representations
Under review. 🌟 **oral (top 15%) at Machine Learning for Computational Biology 2024** 🌟
Gowri, G.*, Lun, XK., Klein, A.*, & Yin, P. [co-corresponding authors *]

Signal amplification by cyclic primer extension enables high-sensitivity single-cell mass cytometry analysis
Nature Biotechnology, 2024.
Lun, XK., Sheng, K., Yu, X., Lam, CY., **Gowri, G.**, Zhai, Y., Kim, Y., Jackson, HW., Ingber, D., Yaffe, M., & Yin, P.

Scalable design of orthogonal DNA barcode libraries
Nature Computational Science, 2024.
Gowri, G.*, Sheng, K., & Yin, P.* [co-corresponding *]

Multi-micron crisscross structures from combinatorially assembled DNA origami slats
Nature Nanotechnology, 2023.
Wintersinger, C. M., Minev, D., Ershova, A., Sasaki, H., **Gowri, G.**, Berengut, J., Corea-Dilbert, F. E., Yin, P., & Shih, W.

Interpretable visualization of single cell data using Janus autoencoders
Learning Meaningful Representations of Life Workshop at NeurIPS, 2022.
Gowri, G., Richter, P., Lun, X., & Yin, P.

Reversible computation using swap reactions on a surface
Lecture Notes in Computer Science, 2019.
Brailovskaya, T.*, **Gowri, G.***, Yu, S.*, & Winfree, E. [contributed equally *]

Combined amplification and molecular classification for gene expression diagnostics
Lecture Notes in Computer Science, 2019.
Gowri, G., Lopez, R., & Seelig, G.

teaching

Teaching Fellow, Integrated Science (statistical mechanics and animal development), Harvard, 2022.

Facilitator, Equity Workshops for SSQBio PhD program, Harvard, 2021-2023.

Teaching Assistant, Biomolecular Computation, Caltech, 2019.

software

latentmi: mutual information estimation in high dimensions. `pip install latentmi`

seqwalk: tool for designing orthogonal DNA sequence libraries. `pip install seqwalk`

honors

Goldwater Scholar, 2019.