

gokul gowri

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 github.com/ggdna

 ggdna.github.io

training

Tayebati Fellow, Schwarzman College of Computing, MIT, 2025-.

hosted by Jonathan Weissman (Whitehead Institute) and Stephen Bates (LIDS)

Ph. D., Systems, Synthetic, and Quantitative Biology, Harvard, 2025.

advised by Peng Yin

B.S. Bioengineering, Caltech, 2020.

advised by Lulu Qian and Erik Winfree

papers

Generative Distribution Embeddings

arXiv, 2025.

Fishman, N.†, **Gowri, G.†**, Yin, P., Gootenberg, J., Abudayyeh, O. [equal contr. and correspondence †]

Measurement noise scaling laws for cellular representation learning

arXiv, 2025.

Gowri, G., Yin, P., Klein, A.M. [co-corresponding ✉]

Approximating mutual information of high-dimensional variables using learned representations

NeurIPS, 2024,  **awarded spotlight**  (top ~ 2.5% submission)

Gowri, G., Lun, XK., Klein, A., & Yin, P. [co-corresponding ✉]

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., Mineev, 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, DNA25 proceedings, 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, DNA25 proceedings, 2019.

Gowri, G., Lopez, R., & Seelig, G.

honors

Tayebati Fellowship, MIT Schwarzman College of Computing, 2025-2027

Spotlight (top 2.5%), Advances in Neural Information Processing conference, 2024.

Selected talk (top 15%), Machine Learning in Computational Biology conference, 2024.

Goldwater Scholar (top ~500 undergraduates nationally), 2019.

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.

maintained software

latentmi: mutual information estimation in high dimensions (python).

```
pip install latentmi  
latentmi.readthedocs.io
```

seqwalk: tool for designing orthogonal DNA sequence libraries (python and julia).

```
pip install seqwalk  
seqwalk.readthedocs.io
```

selected talks

Machine Learning in Computational Biology ([video link](#)), 2024

reviewing

NeurIPS, Journal of Open Source Software (JOSS), Transactions on Machine Learning Research (TMLR), Nature Biotechnology (co-reviewer)