Stanford

Tatsunori Hashimoto

Assistant Professor of Computer Science

Bio

ACADEMIC APPOINTMENTS

- Assistant Professor, Computer Science
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)

LINKS

- website: http://thashim.com

Teaching

COURSES

2023-24

- Language Modeling from Scratch: CS 336 (Spr)
- Natural Language Processing with Deep Learning: CS 224N, LINGUIST 284, SYMSYS 195N (Win)

2022-23

- Advances in Foundation Models: CS 324 (Win)
- Machine Learning Under Distributional Shifts: CS 329D (Spr)

2021-22

- Artificial Intelligence: Principles and Techniques: CS 221 (Spr)
- Machine Learning Under Distributional Shifts: CS 329D (Aut)
- Understanding and Developing Large Language Models: CS 324 (Win)

2020-21

- Artificial Intelligence: Principles and Techniques: CS 221 (Win)
- Machine Learning Under Distributional Shifts: CS 329D (Spr)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Ian Covert

Doctoral Dissertation Advisor (AC)

Yann Dubois, Chen Li, Rohan Taori, Zitong Yang, Tianyi Zhang

Orals Evaluator

Chen Li, Michihiro Yasunaga

Doctoral Dissertation Co-Advisor (AC)

Neil Band, Saminul Haque, Lisa Li

Master's Program Advisor

Guinness Chen, Emily Guo, Jimming He, Joel Johnson, Tony Lee, Casey Nguyen, Giancarlo Ricci, Yash Shah, Nick Soulounias, Jacob Stavrianos, Jirah Taylor, Yuan Wang

Doctoral (Program)

Ishaan Gulrajani, Chen Li, Rohan Taori, Tianyi Zhang

Publications

PUBLICATIONS

- **Measuring Conversational Uptake: A Case Study on Student-Teacher Interactions**
  Demszky, D., Liu, J., Mancenido, Z., Cohen, J., Hill, H., Jurafsky, D., Hashimoto, T., Assoc Computat Linguist
  ASSOC COMPUTATIONAL LINGUISTICS-ACL.2021: 1638-1653

- **Natural Language Generation, its Evaluation and Metrics**
  Gehrmann, S., Adewumi, T., Aggarwal, K., Ammanamanchi, P., Anuoluwapo, A., Bosselut, A., Chandu, K., Clinciu, M., Das, D., Dhole, K. D., Du, W., Durmus, E., Gangal, et al
  ASSOC COMPUTATIONAL LINGUISTICS-ACL.2021: 96-120

- **Perspectives on ENCODE.** *Nature*
  ENCODE Project Consortium, Snyder, M. P., Gingeras, T. R., Moore, J. E., Weng, Z., Gerstein, M. B., Ren, B., Hardison, R. C., Stamatoyannopoulos, J. A., Graveley, B. R., Feingold, E. A., Pazin, M. J., Pagan, M., et al
  2020; 583 (7818): 693–98

- **Approximate Selection with Guarantees using Proxies** *PROCEEDINGS OF THE VLDB ENDOWMENT*
  Kang, D., Gan, E., Bailis, P., Hashimoto, T., Zaharia, M.
  2020; 13 (11): 1990–2003

- **Expanded encyclopaedias of DNA elements in the human and mouse genomes.** *Nature*
  Moore, J. E., Purcaro, M. J., Pratt, H. E., Epstein, C. B., Shoresh, N. n., Adrian, J. n., Kawli, T. n., Davis, C. A., Dobin, A. n., Kaul, R. n., Halow, J. n., Van Nostrand, E. L., Freese, et al
  2020; 583 (7818): 699–710

- **Improved Natural Language Generation via Loss Truncation**
  Kang, D., Hashimoto, T. B., Assoc Computat Linguist
  ASSOC COMPUTATIONAL LINGUISTICS-ACL.2020: 718–31

- **Inferring Multidimensional Rates of Aging from Cross-Sectional Data.** *Proceedings of machine learning research*
  Pierson, E., Koh, P. W., Hashimoto, T., Koller, D., Leskovec, J., Eriksson, N., Liang, P.
  2019; 89: 97–107

- **Inferring Multidimensional Rates of Aging from Cross-Sectional Data**
  Pierson, E., Koh, P., Hashimoto, T., Koller, D., Leskovec, J., Eriksson, N., Liang, P., Chaudhuri, K., Sugiyama, M.
  MICROTOME PUBLISHING.2019: 97–107

- **A Retrieve-and-Edit Framework for Predicting Structured Outputs**
  Hashimoto, T. B., Guu, K., Oren, Y., Liang, P., Bengio, S., Wallach, H., Larochelle, H., Grauman, K., CesaBianchi, N., Garnett, R.
  NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2018

- **DNase-capture reveals differential transcription factor binding modalities.** *PloS one*
  Kang, D., Sherwood, R., Barkal, A., Hashimoto, T., Engstrom, L., Gifford, D.

2017; 12 (12): e0187046

- **Unsupervised Transformation Learning via Convex Relaxations**
  Hashimoto, T. B., Duchi, J. C., Liang, P., Guyon, Luxburg, U. V., Bengio, S., Wallach, H., Fergus, R., Vishwanathan, S., Garnett, R.
  NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2017

- **A synergistic DNA logic predicts genome-wide chromatin accessibility.** *Genome research*
  Hashimoto, T., Sherwood, R. I., Kang, D. D., Rajagopal, N., Barkal, A. A., Zeng, H., Emons, B. J., Srinivasan, S., Jaakkola, T., Gifford, D. K.
  2016; 26 (10): 1430-1440

- **Cas9 Functionally Opens Chromatin.** *PloS one*
  Barkal, A. A., Srinivasan, S., Hashimoto, T., Gifford, D. K., Sherwood, R. I.
  2016; 11 (3): e0152683

- **GERV: a statistical method for generative evaluation of regulatory variants for transcription factor binding.** *Bioinformatics (Oxford, England)*
  Zeng, H., Hashimoto, T., Kang, D. D., Gifford, D. K.
  2016; 32 (4): 490-6

- **Cloning-free CRISPR.** *Stem cell reports*
  Arbab, M., Srinivasan, S., Hashimoto, T., Geijsen, N., Sherwood, R. I.
  2015; 5 (5): 908-917

- **Universal count correction for high-throughput sequencing.** *PLoS computational biology*
  Hashimoto, T. B., Edwards, M. D., Gifford, D. K.
  2014; 10 (3): e1003494

- **Discovery of directional and nondirectional pioneer transcription factors by modeling DNase profile magnitude and shape.** *Nature biotechnology*
  Sherwood, R. I., Hashimoto, T., O'Donnell, C. W., Lewis, S., Barkal, A. A., van Hoff, J. P., Karun, V., Jaakkola, T., Gifford, D. K.
  2014; 32 (2): 171-178

- **Lineage-based identification of cellular states and expression programs.** *Bioinformatics (Oxford, England)*
  Hashimoto, T., Jaakkola, T., Sherwood, R., Mazzoni, E. O., Wichterle, H., Gifford, D.
  2012; 28 (12): i250-7