

ACADEMIC POSITIONS

IIT-Bombay <i>Assistant Professor</i>	Mumbai, MH, India <i>Jun. 2026 (incoming)</i>
Harvard Medical School <i>Post-doctoral research fellow, PI : Dr. Chirag J Patel</i>	Boston, MA, USA <i>Jan. 2025 - present</i>
Georgia Institute of Technology <i>Research Specialist, PI : Dr. Cassie S Mitchell</i>	Atlanta, GA, USA <i>Sep. 2024 - Dec. 2025</i>

EDUCATION

Georgia Institute of Technology <i>Ph.D. Machine Learning. Advisor: Dr. Cassie Mitchell</i>	Atlanta, GA, USA <i>Aug. 2019 - Jul. 2024</i>
Georgia Institute of Technology <i>MS in Analytics</i>	Atlanta, GA, USA <i>Aug. 2017 – Dec. 2018</i>
Indian Institute of Technology, Madras <i>B.Tech. & M.Tech., Mechanical Engineering</i>	Chennai, India <i>Aug. 2009 – July. 2014</i>

HONORS AND AWARDS

Research and Academic Performance Awards

- F.L. “Bud” Suddath and Frances “Lee” Gafford Suddath Fellowship Award, 3rd place, 2024. ([link](#))
- 3-minute thesis finalist (12 among 65 participants), Georgia Tech, 2024. ([link](#))
- Abstract of distinction and special interest group award for behavioral neurology and dementia - American Neurological Association (ANA), 2022.
- Scholarship, Bruce Weir Summer Institute in Statistical Genetics, 2024.
- Raghu Ramamoorthy prize, Indian Institute of Technology Madras, 2014. ([link](#))

Teaching Awards

- Institute-wide online Teaching Assistant of the year award by Georgia Tech., 2022. ([link](#))
- Department of Biomedical Engineering, online Teaching Assistant of the year award by Georgia Tech., 2022.
- Selected participant at “Summer Teaching Institute”, Harvard University, 2025.

PUBLICATIONS

Journal Articles

- J1 Fay, M.E., **Tandon, R.**, Latham. T., et al., “Artificial Intelligence-Based Analysis of Central Nervous System Vasculopathy in Pediatric Sick Cell Anemia,” *American Journal of Hematology*(101), no. 5 (2026): 998–1004,
- J2 **Tandon, R.**, Mei, Y., Lah, J.J. and Mitchell, C.S., 2025. Comprehensive Anatomical Staging Predicts Clinical Progression in Mild Cognitive Impairment: A Data-Driven Approach. *International Journal of Molecular Sciences*, 26(12), p.5514.

- J3 **Tandon, R.**, Zhao, L., Watson, C.M., Sarkar, N., Elmor, M., Heilman, C., Sanders, K., Hales, C.M., Yang, H., Loring, D.W. and Goldstein, F.C., 2025. Stratifying risk of Alzheimer's disease in healthy middle-aged individuals with machine learning. *Brain Communications*, p.fcaf121.
- J4 Sarkar, N.D., **Tandon, R.**, Lah, J.J. and Mitchell, C.S., 2025. ReduXis: A Comprehensive Framework for Robust Event-Based Modeling and Profiling of High-Dimensional Biomedical Data. *International Journal of Molecular Sciences*, 26(18), p.8973.
- J5 Xie, J., **Tandon, R.** and Mitchell, C.S., 2025. Network Diffusion-Constrained Variational Generative Models for Investigating the Molecular Dynamics of Brain Connectomes Under Neurodegeneration. *International Journal of Molecular Sciences*, 26(3), p.1062.
- J6 Singh, A., Maker, M., Prakash, J., **Tandon, R.** and Mitchell, C.S., 2024. What Threshold of Amyloid Reduction Is Necessary to Meaningfully Improve Cognitive Function in Transgenic Alzheimer's Disease Mice?. *Journal of Alzheimer's Disease Reports*, 8(1), pp.371-385.
- J7 Mukherjee, S., McCaw, Z.R., Pei, J., Merkoulavitch, A., Soare, T., **Tandon, R.**, Amar, D., Somineni, H., Klein, C., Satapati, S. and Lloyd, D., 2024. EmbedGEM: a framework to evaluate the utility of embeddings for genetic discovery. *Bioinformatics Advances*, 4(1), p.vbae135.
- J8 **Tandon, R.**, Levey, A.I., Lah, J.J., Seyfried, N.T. and Mitchell, C.S., 2023. Machine learning selection of most predictive brain proteins suggests role of sugar metabolism in Alzheimer's disease. *Journal of Alzheimer's Disease*, 92(2), pp.411-424.
- J9 Nagpal, S., **Tandon, R.** and Gibson, G., 2022. Canalization of the polygenic risk for common diseases and traits in the UK Biobank cohort. *Molecular Biology and Evolution*, 39(4), p.msac053.
- J10 Keshtkaran, M.R., Sedler, A.R., Chowdhury, R.H., **Tandon, R.**, Basrai, D., Nguyen, S.L., Sohn, H., Jazayeri, M., Miller, L.E. and Pandarinath, C., 2022. A large-scale neural network training framework for generalized estimation of single-trial population dynamics. *Nature Methods*, 19(12), pp.1572-1577.
- J11 Zhu, F., Grier, H.A., **Tandon, R.**, Cai, C., Agarwal, A., Giovannucci, A., Kaufman, M.T. and Pandarinath, C., 2022. A deep learning framework for inference of single-trial neural population dynamics from calcium imaging with subframe temporal resolution. *Nature Neuroscience*, 25(12), pp.1724-1734.

Conference Articles in Proceedings

- C1 **Tandon, R.**, Lah, J.J. and Mitchell, C.S., 2024, July. s-SuStaIn: Scaling subtype and stage inference via simultaneous clustering of subjects and biomarkers. In *Conference on Health, Inference, and Learning* (pp. 461-476). PMLR.
- C2 **Tandon, R.**, Kirkpatrick, A. and Mitchell, C.S., 2023, June. sEBM: Scaling event based models to predict disease progression via implicit biomarker selection and clustering. In *International Conference on Information Processing in Medical Imaging* (pp. 208-221). Cham: Springer Nature Switzerland.

Journal manuscripts in submission

- M1 **Tandon, R.**, Fard, P., Estiri H. and Patel, C (2025). Asymmetric Impacts of Extreme Weather: Cold Events Disrupt More Than Heat.
- M2 McGrath, B., Estiri, H., Georgescu, J., Giebultowicz, S., Fard, P., **Tandon, R.** et. al. Protocol: Evaluate the Impact of Extreme Heat on Blood Pressure to Generate Evidence to Support Primary Care Community Health Centers.
- M3 Cheng, J., Fard, P., Mork, D., **Tandon, R.**, Dominici, F., Patel, C., Estiri, H. Beyond the Average: County-Level Trends in Apparent Temperature Extremes Across the United States.
- M4 Wang, M., **Tandon, R.**, Patel, C. Income disparities, the exposome, and all cause mortality.

Conference Abstracts

- A1 Mitchell, C., **Tandon, R.** and Lah, J. “Disease Progression Modeling Shows Blood Linked Peptides to be Early Markers in Alzheimer’s Disease Subtypes” *American Neurological Association*, 2024.
- A2 **Tandon R**, Lah JJ, Mitchell CS. “Scaled Event Based Modeling to Predict Alzheimer’s Disease Progression Dynamics.” *American Neurological Association*, 2023.
- A3 **Tandon R**, Watson CM, Seyfried NT, Zhao L, Lah J, Mitchell CS. “Multimodal Machine Learning to Identify Risk of Progression in Asymptomatic Alzheimer’s Disease.” *American Neurological Association*, 2022 (oral presentation).
- A4 **Tandon R**, Watson CM, Seyfried NT, Mitchell CS, Zhao L, Lah J. “Machine Learning to Stratify Asymptomatic Alzheimer’s Disease Progression Risk with Cerebrospinal Fluid Biomarkers.” *Alzheimer’s Association International Conference*, 2022.
- A5 **Tandon R**, Dammer E, Seyfried NT, Mitchell CS. “Machine Learning based classification of diagnostic proteomics in Alzheimer’s Disease.” *American Neurological Association*, 2021.
- A6 **Tandon R**, Seyfried NT, Mitchell CS. “AI-based Selection of Superior Proteomic Biomarkers for Classifying Alzheimer’s Disease.” *Alzheimer’s Association International Conference, Neuroscience Next*, 2021.
- A7 **Tandon R**, Subramanian S, Mitchell CS. “Towards Universal Deep Learning Artificial Intelligence for Alzheimer’s Disease Magnetic Resonance Imaging.” *American Neurological Association*, 2021.
- A8 Zhu F, Grier HA, **Tandon R**, Cai C, Giovannucci A, Kaufman MT, Pandarinath C. “Precise inference of single trial network dynamics from calcium imaging using LFADS.” *Computational and Systems Neuroscience*, 2021.
- A9 Keshtkaran MR, **Tandon R**, Basrai D, Nguyen SL, Chowdhury RH, Sohn H, Jazayeri M, Miller LE, Pandarinath C. “AutoLFADS:A large-scale neural network training framework for generalized estimation of single-trial population dynamics.” *Computational and Systems Neuroscience*, 2020.
- A10 **Tandon R**, Grier H, Kaufman MT, Pandarinath C. “Deep learning to extract single-trial trajectories from two-photon calcium imaging.” *Society for Neuroscience*, 2019.

REVIEWING EXPERIENCE

Nature Communications, PLOS One, Exposome, President’s Undergraduate Research Awards (PURA, Georgia Tech).

INVITED TALKS

International Research Conference on Neurodegenerative Diseases July '24, Atlanta, USA
Machine Learning for modeling heterogeneity and progression in Alzheimer’s Disease

Magnetic Resonance Physics of Aging and Dementia, NIA Nov '24, Atlanta, USA
Machine Learning for modeling heterogeneity and progression in Alzheimer’s Disease

TEACHING ASSISTANT

- Computing for Data Analysis in Python (CSE 6040x), Spring '18, Fall '18.
- Introduction to Bio-engineering statistics (BMED 2400), Fall '20, Spring '21, Summer '21, Summer '22.

OTHER RESEARCH EXPERIENCE

Research Specialist Emory University, USA
Inferring single-trial neural population dynamics from electrophysiological and 2-photon data using sequential auto-encoders Jan. '19 - Aug. '19

Research Intern*Proteomic data analysis for biomarker discovery in Alzheimer's disease*

Emory University, USA

*May. '18 - Aug. '18***Research Assistant***Analysis of multi-effect, multi-stage vapor absorption refrigeration systems with ionic liquids as absorbents*

Universitat Rovira i Virgili, Spain

*Feb. '14 - Apr. '14***INDUSTRY EXPERIENCE**

Insitro*Data Science and Machine Learning Intern*

South San Francisco, USA

*May 2023 - Aug 2023***Coplug***Data Analyst*

New Delhi, India

*Oct 2016 - Aug 2017***Elucidata***Data Scientist (Founding Team)*

New Delhi, India

*Oct 2015 - Oct 2016***Deutsche Bank***Analyst*

Mumbai, India

Jun 2014 - Sep 2015