

Sriram J. Hathwar

hathwar.sj@gmail.com

<https://www.linkedin.com/in/shathwar>

<https://github.com/hathwars>

Education	Princeton University , B.S.E. Operations Research, 3.7 GPA 2018–2022 <ul style="list-style-type: none">• Minors in Statistics & Machine Learning, Quantitative & Computational Biology• Algorithms and Data Structures, Computer Systems Design, Analysis of Big Data, Advanced Computational Genomics, Organic Chemistry I and II
Experience	Computational Biologist , RAPT Therapeutics 2022–2024 <ul style="list-style-type: none">• Developed a novel computational platform to identify combination therapy partners and predictive biomarkers for leading cancer drug in clinical trials• Applied deconvolution algorithms to bulk RNAseq patient biopsy samples to identify cell type specific gene expression profiles• Saved discovery biology team \$30K by demonstrating similarity in measurements between in-house assays and external studies• First authored a poster and presented findings to the Scientific Advisory Board AI & Healthcare Curriculum Manager , Inspirit AI 2020–Present <ul style="list-style-type: none">• Design curriculum and teach high school students about applications of computer vision, NLP, and reinforcement learning to problems in healthcare• Explain math and theory behind various machine learning techniques including convolutional neural networks, transformers, LLMs, prompt engineering, RAG• Tutor students 1:1 for projects applying machine learning to healthcare, currently published in the Journal of Emerging Investigators Bioinformatics Research Assistant , WashU School of Medicine Summer 2021 <ul style="list-style-type: none">• Trained diffusion maps and graphical neural networks on single-cell RNA-seq data from a human embryo and gastruloid to model germ layer formation• Discovered potential heterogeneity in mesoderm formation, intend to deploy model for public use and confirm results experimentally Computational Neuroscience Research Assistant , Seung Lab 2020–2021 <ul style="list-style-type: none">• Used k-means clustering as baseline model to cluster neuronal types in mice• Applied literature algorithms like time-inhomogeneous diffusion condensation to compare clustering outcomes with baseline model
Projects	Integrated Latent Variable Model for Lapses in Rodent Decision-Making <ul style="list-style-type: none">• Worked under Princeton Professor Jonathan Pillow to model mice decision-making in sensory analysis experiments for senior thesis• Explored an integrated approach using reinforcement learning and Hidden Markov models to model stimulus-independent error rates in rodent perception tasks Replicating Large Scale Multi-Omic Analysis of COVID-19 Severity <ul style="list-style-type: none">• Led undergraduate team to reproduce published results analyzing metabolites, proteins, transcripts, and lipids from COVID-19 patient blood samples• Wrote SQLite queries to access patient data from distinct tables and performed standard dimensionality reduction techniques like PCA for further analysis• Developed random forest machine learning model to predict patient COVID-19 status and severity based on multi-omic dataset from Overmyer et. al (2020)
Skills	Python, R, MATLAB, SQL, Go, Java, Scala, Git, Machine Learning, HTML, CSS