Jean Feng

Position

July 2025– Present	**Associate Professor In-Residence**, Department of Epidemiology and Biostatistics, *University of California, San Francisco*
July 2025– Present	**Associate Professor**, UCSF-UC Berkeley Joint Program in Computational Precision Health
July 2020– July 2025	**Assistant Professor In-Residence**, Department of Epidemiology and Biostatistics, *University of California, San Francisco*
Nov 2022– July 2025	**Assistant Professor**, UCSF-UC Berkeley Joint Program in Computational Precision Health

Education

Sept 2015– June 2020	**PhD, Biostatistics**, *University of Washington*, Seattle, WA Advisors: Noah Simon, Frederick Albert Matsen IV
2012–2013	**MS, Computer Science**, *Stanford University*, Stanford, CA
2009–2013	**BS, Computer Science**, *Stanford University*, Stanford, CA

Publications

Avni Kothari, Patrick Vossler, Jean Digitale, Mohammad Forouzannia, Elise Rosenberg, Michele Lee, Jennee Bryant, Melanie Molina, James Marks, Lucas Zier, and Jean Feng. When the domain expert has no time and the LLM developer has no clinical expertise: Real-world lessons from LLM co-design in a safety-net hospital. *Proc. Conf. AAAI Artif. Intell.*, 2026.

Jean Feng, Fan Xia, Karandeep Singh, and Romain Pirracchio. Not all clinical AI monitoring systems are created equal: Review and recommendations. *NEJM AI*, 2025.

Jean Feng, Avni Kothari, Luke Zier, Chandan Singh, and Yan Shuo Tan. Bayesian concept bottleneck models with LLM priors. *Adv. Neural Inf. Process. Syst.*, 2025.

Harvineet Singh, Fan Xia, Alexej Gossmann, Andrew Chuang, Julian C Hong, and Jean Feng. Who experiences large model decay and why? A hierarchical framework for diagnosing heterogeneous performance drift. *International Conference on Machine Learning*, 2025.

Jed Keenan Obra, Chandan Singh, Kenshata Watkins, Jean Feng, Ziad Obermeyer, and Aaron Kornblith. Potential for algorithmic bias in clinical decision instrument development. *NPJ Digit. Med.*, 2025.

Heyuan Michael Ni, Ramez Kouzy, Ali Sabbagh, Michael K Rooney, Jean Feng, Simon P Castillo, Sherif M Gadoue, Zakaria El Kouzi, Karen Hoffman, Yinyin Yuan, Anant Madabhushi, and Osama Mohamad. The state of the art in artificial intelligence and digital pathology in prostate cancer. *Nat. Rev. Urol.*, 2025.

Likhitha Kolla, Kristin Linn, Amol S Navathe, Craig Kreisler, Christopher B Roberts, Sae-Hwan Park, Harvineet Singh, Jean Feng, Jinbo Chen, and Ravi B Parikh. Performance drift in a nationally deployed population health risk algorithm in the US veterans health administration. *JAMA Health Forum*, 2025.

Alexandre Kalimouttou, Jason N Kennedy, Jean Feng, Harvineet Singh, Suchi Saria, Derek C Angus, Christopher W Seymour, and Romain Pirracchio. Optimal vasopressin initiation in septic shock: The OVISS reinforcement learning study. *JAMA*, 2025.

Laleh Foroutani, Andrew Gonzalez, Jaeyun Jane Wang, Bahaa I Aburayya, Amir Ashraf Ganjouei, Jean Feng, Lucas Willian Thornblade, Kenzo Hirose, Ajay V Maker, Eric Nakakura, Carlos Uriel Corvera, Adnan Alseidi, and Mohamed A Adam. Minimally invasive distal pancreatectomy as the standard of care in the US: Are we there yet? *Cancers (Basel)*, 2025.

Chichi Chang, Jie Jane Chen, Jean Feng, Isabel Friesner, Somya Mohindra, Lauren Boreta, Michael W Rabow, Steve E Braunstein, Ryzen Benson, and Julian C Hong. Patterns in symptoms preceding acute care in patients with cancer. *JAMA Netw. Open*, 2025.

Daniel J Bennett, Jean Feng, Seth Goldman, Avni Kothari, Laura M Gottlieb, Matthew S Durstenfeld, James Marks, Susan Ehrlich, Jonathan Davis, and Lucas S Zier. Reducing readmissions in the safety net through AI and automation. *Am. J. Manag. Care*, 2025.

Jane Wang, Francesca Tozzi, Amir Ashraf Ganjouei, Fernanda Romero-Hernandez, Jean Feng, Lucia Calthorpe, Maria Castro, Greta Davis, Jacquelyn Withers, Connie Zhou, Zaim Chaudhary, Mohamed Adam, Frederik Berrevoet, Adnan Alseidi, and Nikdokht Rashidian. Machine learning improves prediction of postoperative outcomes after gastrointestinal surgery: A systematic review and meta-analysis. *J. Gastrointest. Surg.*, 2024.

Jean Feng, Adarsh Subbaswamy, Alexej Gossmann, Harvineet Singh, Berkman Sahiner, Mi-Ok Kim, Gene Pennello, Nicholas Petrick, Romain Pirracchio, and Fan Xia. Designing monitoring strategies for deployed machine learning algorithms: navigating performativity through a causal lens. *Conference on Causal Learning and Reasoning*, 2024.

Jean Feng, Alexej Gossmann, Romain Pirracchio, Nicholas Petrick, Gene Pennello, and Berkman Sahiner. Is this model reliable for everyone? testing for strong calibration. *AISTATS*, 2024.

Jean Feng, Alexej Gossmann, Gene Pennello, Nicholas Petrick, Berkman Sahiner, and Romain Pirracchio. Monitoring machine learning (ML)-based risk prediction algorithms in the presence of confounding medical interventions. *AISTATS*, 2024.

Harvineet Singh, Fan Xia, Adarsh Subbaswamy, Alexej Gossmann, and Jean Feng. A hierarchical decomposition for explaining ML performance discrepancies. *Adv. Neural Inf. Process. Syst.*, 2024.

Isabel D Friesner, Jean Feng, Shalom Kalnicki, Madhur Garg, Nitin Ohri, and Julian C Hong. Machine Learning–Based prediction of hospitalization during chemoradiotherapy with daily step counts. *JAMA Oncol*, 2024.

Arianne Caudal, Yu Liu, Paul D Pang, David P Maison, Kosuke Nakasuka, Jean Feng, H S Schwarzer-Sperber, Roland Schwarzer, Ellen Moffatt, Timothy J Henrich, Arun Padmanabhan, Andrew J Connolly, Joseph C Wu, and Zian H Tseng. Transcriptomic profiling of human myocardium at sudden death to define vulnerable substrate for lethal arrhythmias. *JACC Clin. Electrophysiol.*, 2024.

Siavash Zamirpour, Alan E Hubbard, Jean Feng, Atul J Butte, Romain Pirracchio, and Andrew Bishara. Development of a machine learning model of postoperative acute kidney injury using Non-Invasive Time-Sensitive intraoperative predictors. *Bioengineering*, 2023.

Jaeyun Jane Wang, Jean Feng, Camilla Gomes, Lucia Calthorpe, Amir Ashraf Ganjouei, Fernanda Romero-Hernandez, Andrea Benedetti Cacciaguerra, Taizo Hibi, Mohamed Abdelgadir Adam, Adnan Alseidi, Mohammad Abu Hilal, Nikdokht Rashidian, and International Post-Hepatectomy Liver Failure Study Group. Development and validation of prediction models and risk calculators for Post-Hepatectomy liver failure and postoperative complications using a diverse international cohort of major hepatectomies. *Ann. Surg.*, 2023.

Jean Feng, Adarsh Subbaswamy, Alexej Gossmann, Harvineet Singh, Berkman Sahiner, Mi-Ok Kim, Gene Pennello, Nicholas Petrick, Romain Pirracchio, and Fan Xia. Towards a Post-Market monitoring framework for machine learning-based medical devices: A case study. *Workshop on Regulatable Machine Learning at the 37th Conference on Neural Information Processing Systems*, 2023.

Alexandra B Steverson, Paul J Marano, Caren Chen, Yifei Ma, Rachel J Stern, Jean Feng, Efstathios D Gennatas, James D Marks, Matthew S Durstenfeld, Jonathan D Davis, Priscilla Y Hsue, and Lucas S Zier. Predictors of All-Cause Thirty-Day readmissions in patients with heart failure at an urban safety net hospital: The importance of social determinants of health. *American Journal of Medicine Open*, 2023.

Harvineet Singh, Fan Xia, Mi-Ok Kim, Romain Pirracchio, Rumi Chunara, and Jean Feng. A brief tutorial on sample size calculations for fairness audits. *Workshop on Regulatable Machine Learning at the 37th Conference on Neural Information Processing Systems*, 2023.

Ali Sabbagh, Samuel L Washington, 3rd, Derya Tilki, Julian C Hong, Jean Feng, Gilmer Valdes, Ming-Hui Chen, Jing Wu, Hartwig Huland, Markus Graefen, Thomas Wiegel, Dirk Bohmer, Janet E Cowan, Matthew Cooperberg, Felix Y Feng, Mack Roach, 3rd, Bruce J Trock, Alan W Partin, Anthony V D'Amico, Peter R Carroll, and Osama Mohamad. Development and external validation of a machine learning model for prediction of lymph node metastasis in patients with prostate cancer. *Eur Urol Oncol*, 2023.

Ali Sabbagh, Derya Tilki, Jean Feng, Hartwig Huland, Markus Graefen, Thomas Wiegel, Dirk Böhmer, Julian C Hong, Gilmer Valdes, Janet E Cowan, Matthew Cooperberg, Felix Y Feng, Tarek Mohammad, Mohamed Shelan, Anthony V D'Amico, Peter R Carroll, and Osama Mohamad. Multi-institutional development and external validation of a machine learning model for the prediction of distant metastasis in patients treated by salvage radiotherapy for biochemical failure after radical prostatectomy. *European Urology Focus*, 2023.

Phoebe N Miller, Fernanda Romero-Hernandez, Patricia Conroy, Lucia Calthorpe, Mignote Yilma, Sarah Mohamedaly, Yvonne M Kelly, Jean Feng, Kenzo Hirose, Kimberly Kirkwood, Ajay V Maker, Carlos Corvera, Eric Nakakura, Adnan Alseidi, and Mohamed A Adam. Hand-Assisted versus pure Minimally-Invasive distal pancreatectomy: Is there a downside to lending a hand? *World J. Surg.*, 2023.

Jackie J Lin, Patricia C Conroy, Fernanda Romero-Hernandez, Mignote Yilma, Jean Feng, Kenzo Hirose, Eric Nakakura, Ajay V Maker, Carlos Corvera, Kimberly Kirkwood, Adnan Alseidi, and Mohamed A Adam. Hypertension requiring medication use: a silent predictor of poor outcomes after pancreaticoduodenectomy. *J. Gastrointest. Surg.*, 2023.

Leila Haghighat, Satvik Ramakrishna, James W Salazar, Jean Feng, Joey Chiang, Ellen Moffatt, and Zian H Tseng. Homelessness and incidence and causes of sudden death: Data from the POST SCD study. *JAMA Intern. Med.*, 2023.

Jean Feng and Noah Simon. Ensembled sparse-input hierarchical networks for high-dimensional datasets. *Statistical Analysis and Data Mining*, 2022.

Jean Feng, Rachael V Phillips, Ivana Malenica, Andrew Bishara, Alan E Hubbard, Leo A Celi, and Romain Pirracchio. Clinical artificial intelligence quality improvement: towards continual monitoring and updating of AI algorithms in healthcare. *npj Digital Medicine*, 2022.

Jean Feng, Gene Pennello, Nicholas Petrick, Berkman Sahiner, Romain Pirracchio, and Alexej Gossmann. Sequential algorithmic modification with test data reuse. *Proceedings of the Thirty-Seventh Conference on Uncertainty in Artificial Intelligence*, 2022.

Jean Feng, Alexej Gossmann, Berkman Sahiner, and Romain Pirracchio. Bayesian logistic regression for online recalibration and revision of risk prediction models with performance guarantees. *Journal of the American Medical Informatics Association*, 2022.

Daniel Lazzareschi, Ravindra L Mehta, Laura M Dember, Juliane Bernholz, Alparslan Turan, Amit Sharma, Sachin Kheterpal, Chirag R Parikh, Omar Ali, Ivonne H Schulman, Abigail Ryan, Jean Feng, Noah Simon, Romain Pirracchio, Patrick Rossignol, and Matthieu Legrand. Overcoming barriers in the design and implementation of clinical trials for acute kidney injury: a report from the 2020 kidney disease clinical trialists meeting. *Nephrol. Dial. Transplant*, 2022.

Andre Esteva, Jean Feng, Douwe van der Wal, Shih-Cheng Huang, Jeffry P Simko, Sandy DeVries, Emmalyn Chen, Edward M Schaeffer, Todd M Morgan, Yilun Sun, Amirata Ghorbani, Nikhil Naik, Dhruv Nathawani, Richard Socher, Jeff M Michalski, Mack Roach, Thomas M Pisansky, Jedidiah M Monson, Farah Naz, James Wallace, Michelle J Ferguson, Jean-Paul Bahary, James Zou, Matthew Lungren, Serena Yeung, Ashley E Ross, Howard M Sandler, Phuoc T Tran, Daniel E Spratt, Stephanie Pugh, Felix Y Feng, and Osama Mohamad. Prostate cancer therapy personalization via multi-modal deep learning on randomized phase III clinical trials. *npj Digital Medicine*, 2022.

Jean Feng, Arjun Sondhi, Jessica Perry, and Noah Simon. Selective prediction-set models with coverage guarantees. *Biometrics*, 2021.

Jean Feng, Scott Emerson, and Noah Simon. Approval policies for modifications to Machine Learning-Based software as a medical device: A study of bio-creep. *Biometrics*, 2021.

Jean Feng, William S DeWitt, Aaron McKenna, Noah Simon, Amy Willis, and Frederick A Matsen. Estimation of cell lineage trees by maximum-likelihood phylogenetics. *Annals of Applied Statistics*, 2021.

Jean Feng. Learning to safely approve updates to machine learning algorithms. *Proceedings of the Conference on Health, Inference, and Learning*, 2021.

Brian D Williamson and Jean Feng. Efficient nonparametric statistical inference on population feature importance using shapley values. *International Conference on Machine Learning*, 2020.

Jean Feng and Noah Simon. An analysis of the cost of hyper-parameter selection via split-sample validation, with applications to penalized regression. *Statistica Sinica*, 2020.

Jean Feng, David A Shaw, Vladimir N Minin, Noah Simon, and Frederick A Matsen, IV. Survival analysis of DNA mutation motifs with penalized proportional hazards. *Ann. Appl. Stat.*, 2019.

Kristian Davidsen, Branden J Olson, William S DeWitt, 3rd, Jean Feng, Elias Harkins, Philip Bradley, and Frederick A Matsen, 4th. Deep generative models for T cell receptor protein sequences. *Elife*, 2019.

Jean Feng, Brian Williamson, Noah Simon, and Marco Carone. Nonparametric variable importance using an augmented neural network with multi-task learning. *International Conference on Machine Learning*, 2018.

Jean Feng and Noah Simon. Gradient-based regularization parameter selection for problems with nonsmooth penalty functions. *J. Comput. Graph. Stat.*, 2018.

Pre-prints

Jean Feng, Avni Kothari, Patrick Vossler, Andrew Bishara, Lucas Zier, Newton Addo, Aaron Kornblith, Yan Shuo Tan, and Chandan Singh. Human-ai co-design for clinical prediction models. *arXiv*, 2026.

Will Zou, Jean Feng, Alexandre Kalimouttou, Jennifer Zhang, Christopher Seymour, and Romain Pirracchio. Realistic CDSS drug dosing with end-to-end recurrent Q-learning for dual vasopressor control. *NeurIPS 2025 Workshop on Learning from Time Series for Health*, 2025.

Patrick Vossler, Fan Xia, Yifan Mai, Adarsh Subbaswamy, and Jean Feng. LLMs judging LLMs: A simplex perspective. *arXiv*, 2025.

Jean Feng and Noah Simon. Sparse-Input neural networks for high-dimensional nonparametric regression and classification. *arXiv*, 2019.

Abstracts

A Sabbagh, D Tilki, J Feng, J C Hong, M H Chen, J Wu, H Huland, M Graefen, T Wiegel, D Böhmer, S Washington, III, J Cowan, M R Cooperberg, F Y Feng, P Carroll, B Trock, A W Partin, A V DAmico, and O Mohamad. Machine learning for the prediction of distant metastases following postprostatectomy salvage radiation therapy. *Int. J. Radiat. Oncol. Biol. Phys.*, 2022.

A Sabbagh, S Washington Iii, D Tilki, J C Hong, J Feng, M H Chen, J Wu, H Huland, M Graefen, T Wiegel, D Böhmer, J Cowan, M R Cooperberg, F Y Feng, B Trock, A W Partin, A V DAmico, P Carroll, and O Mohamad. Machine learning for the prediction of lymph node metastasis in patients with prostate cancer. *Int. J. Radiat. Oncol. Biol. Phys.*, 2022.

I Friesner, J Feng, S Kalnicki, M K Garg, N Ohri, and J C Hong. Machine Learning-Based prediction of hospitalization using daily step counts for patients undergoing chemoradiation. *Int. J. Radiat. Oncol. Biol. Phys.*, 2022.

Denise Cecil, Jean Feng, Alex Paynter, Jessica Perry, Noah Simon, Nicholas Drovetto, Lauren Corulli, Erin Rodmaker, Susan Strenk, David Fredricks, and Mary Disis. 1308 bacteria specific IL-10 secreting t-cells derived from the gut are cross-reactive with tumor antigens and accelerate tumor growth in mouse models. *J Immunother Cancer*, 2022.

Presentations

Invited Oral Presentations and Seminars

2026 *Monitoring clinical AI systems: Where are we now and where do we want to be?*, Simons Institute for the Theory of Computating, Workshop on Bridging Prediction and Intervention Problems in Social Systems

2026 *Scaling Medical Device Regulatory Science using Large Language Models*, Center of Excellence in Regulatory Science and Innovation (CERSI) Summit

2025 *LLMs judging LLMs: A Simplex Perspective*, Peking University, Biostatistics Seminar

2025 *Beyond the benchmark dataset: Real-world generalizability and regulatory challenges in medical AI*, Medical Image Computing and Computer Assisted Intervention Society (MICCAI) Special Interest Group for Biomedical Image Analysis Challenges

2025 *Monitoring clinical AI: Where are we now and where do we want to be?*, Machine Learning for Healthcare (MLHC) pre-conference workshop

2025 *External Validation of Clinical AI Models: Addressing Performance Decay and Distribution Shifts*, Symposium for the Launch of the Center for External AI validation in Healthcare, Taiwan Ministry of Health and Welfare

2025 *Translational Research in a Rapidly Changing World*, ACM Conference on Health, Inference, and Learning

2025 *Opportunities to leverage LLMs across the clinical AI/ML lifecycle*, Deep Learning and Health Futures Seminar, Microsoft Research

2025 *Are we ready to monitor clinical ML/AI algorithms?*, Biostatistics Seminar Series, University of Washington

2025 *Bayesian Concept Bottleneck Models with LLM Priors*, Deep Learning Affinity Group, Fred Hutchinson Cancer Center

2025 *Bayesian Concept Bottleneck Models with LLM Priors*, University of Southern California, SEEDS (Statistics Empowering Data Science) Conference

2025 *Towards a Post-Market monitoring framework for machine learning-based medical devices*, International Conference on Health Policy Statistics (ICHPS)

2024 *Bayesian Concept Bottleneck Models with LLM Priors*, FDA OSEL AI/ML Program Research Update Meeting

2024 *Strategies for Developing and Implementing AI/ML in Underserved Healthcare Environments*, AMIA Anual Symposium

2024 *Towards a Post-Market monitoring framework for machine learning-based medical devices*, Joint seminar between UC Berkeley Center for Targeted Machine Learning and the UCSF-UC Berkeley Computational Precision Health Program

2024 *Towards a Post-Market monitoring framework for machine learning-based medical devices*, Brown University, Symposium celebrating 30 Years of Biostatistics at Brown University

2024 *Bayesian Priors From Large Language Models Make Clinical Prediction Models More Interpretable*, AMIA 2024 Annual Symposium

2024 *"Why did the AUC drop?" A Hierarchical Framework to Explain Performance Changes of Machine Learning Models across Hospital Sites*, AMIA 2024 Annual Symposium

2024 *Towards a Post-Market monitoring framework for machine learning-based medical devices*, Johnson and Johnson MedTech Data Science Seminar

2024 *Designing monitoring strategies for deployed machine learning algorithms: navigating performativity through a causal lens*, Joint Statistical Meetings

2024 *Is this model reliable for everyone? Testing for strong calibration*, International Conference on Econometrics and Statistics

2024 *The Science Behind Monitoring and Updating AI Models*, Symposium on Artificial Intelligence for Learning Health Systems (SAIL)

2024 *Quality assurance and improvement for Machine Learning-based medical devices*, AI Regulatory and International Symposium (AIRIS)

2024 *Towards a Post-Market monitoring framework for machine learning-based medical devices: A case study*, CERSI Scientific Symposium

2023 *Statistical Tools for Auditing Machine Learning Algorithms Across Subgroups and Time*, IMS Young Mathematical Scientists Forum

2023 *Statistical Tools for Auditing Machine Learning Algorithms Across Subgroups and Time*, Bay Area Biotech-Pharma Statistics Workshop

2023 *Sequential algorithmic modification with test data reuse*, Medical Imaging and Data Resource Center Seminar

2023 *Is this risk prediction model reliable for everyone? A test for strong model calibration*, Joint Statistical Meetings

2023 *Monitoring machine learning (ML)-based risk prediction algorithms in the presence of confounding medical interventions*, Joint Statistical Meetings

2023 *Monitoring machine learning (ML)-based risk prediction algorithms in the presence of confounding medical interventions*, International Chinese Statistical Association Applied Statistics Symposium

2023 *Quality assurance and improvement for Machine Learning-based clinical decision support systems*, UC Berkeley Biostatistics Seminar

2023 *Monitoring machine learning (ML)-based prediction algorithms in the presence of confounding medical interventions*, AMIA 2023 Informatics Summit

2022 *Efficient nonparametric statistical inference for population variable importance*, IMS International Conference on Statistics and Data Science (ICSDS)

2022 *Opportunities at the intersection of Machine Learning and Epidemiology*, Society for Epidemiologic Research (SER) Digital

2022 *Quality assurance and improvement for Machine Learning-based clinical decision support systems*, Colorado School of Public Health

2022 *Statistical Methods for Monitoring and Updating AI/ML-Based Software as a Medical Device*, ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop

2022 *Sequential algorithmic modification with test data reuse*, Uncertainty in Artificial Intelligence

2022 *Approval policies for modifications to Machine Learning-Based Software as a Medical Device: A study of bio-creep*, International Biometrics Society Journal Club

2021 *Safe approval policies for continual learning systems in healthcare*, Brown University

2021 *Bayesian logistic regression for online recalibration and revision of risk prediction models with guarantees*, ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop

2021 *Variable Selection and Architecture Search for Neural Networks*, ASA Statistical Learning and Data Science Webinar

2021 *Bayesian logistic regression for online recalibration and revision of risk prediction models with guarantees*, Western North American Region (WNAR) Annual Meeting

2021 *Learning to safely approve updates to machine learning algorithms*, ACM Conference on Health, Inference, and Learning

2021 *Safe approval policies for continual learning systems in healthcare*, University of Waterloo

2020   *Efficient nonparametric statistical inference on population feature importance using Shapley values*, International Conference on Machine Learning

2020   *Training Procedures and Regulatory Policies for Safe Machine Learning Models in Healthcare*, University of California, San Francisco

2020   *Training Procedures and Regulatory Policies for Safe Machine Learning Models in Healthcare*, The University of Texas, MD Anderson Cancer Center

2020   *Training Procedures and Regulatory Policies for Safe Machine Learning Models in Healthcare*, University of California, Irvine

2020   *Approval policies for modifications to Machine Learning-Based Software as a Medical Device: A study of Bio-creep*, International Conference on Health Policy Statistics

2019   *Sparse-Input Neural Networks for High-dimensional Nonparametric Regression and Classification*, Western North American Region (WNAR) Annual Meeting

2018   *Nonparametric variable importance using an augmented neural network with multi-task learning*, International Conference on Machine Learning

2018   *Sparse-Input Neural Networks for High-dimensional Nonparametric Regression and Classification*, University of Washington Biostatistics Colloquium

2018   *Sparse-Input Neural Networks for High-dimensional Nonparametric Regression and Classification*, Joint Statistical Meetings

2017   *Sparse-Input Neural Networks for High-dimensional Nonparametric Regression*, ICML Workshop on Principled Approaches to Deep Learning

2011   *Haptic Belt with Pedestrian Detection*, Neural Information Processing Systems

Contributed Oral Presentations

2025   *Accelerating 510(k) Predicate Device Selection Using Large Language Models and Data Visualization*, Innovations in Regulatory Science Summit

2023   *Monitoring machine learning (ML)-based risk prediction algorithms: Addressing the challenge of confounding medical interventions*, 2023 Innovations in Regulatory Science Summit

2019   *Uncertainty-Aware Black-Box Predictors with Coverage Guarantees*, Joint Statistical Meetings

Funding History

2026-2027   UCSF Department of Epidemiology and Biostatistics, Artificial Intelligence/Machine Learning for Health Seed Grant; Role: co-PI
"Post-market surveillance of AI Scribes with LLM-based causal monitoring": $50,000 in direct costs

2023-2026   Patient-Centered Outcomes Research Institute; Role: PI
"Diagnostic tools for quality improvement of machine learning-based clinical decision support systems": $750,000 in direct costs
+ "Methods Supplement to Support Innovative Research on AI and Large Language Models in Patient-Centered CER": $225,000 in direct costs

| 2020-2023 | UCSF-Stanford CERSI Program; Role: PI
"Safe algorithmic change protocols for modifications to AI/ML-based Software as a Medical Device": $170,000 in direct costs |

Awards

2020	University of Washington Thomas R. Fleming Excellence in Biostatistics Award
2020	International Conference on Health Policy Statistics, Student Travel Award For manuscript: *Approval policies for modifications to Machine Learning-Based Software as a Medical Device*
2018	Joint Statistical Meetings Section on Statistical Learning and Data Science, Student Paper Award For manuscript: *Sparse-input neural networks for high-dimensional nonparametric regression and classification*
2018	University of Washington Biostatistics Donovan J. Thompson Award for Best Combined Performance on Ph.D. Theory and Applied Qualifying Examinations
2015–2017	Big Data for Genomics and Neuroscience Training Grant

Software

EASIER-Net	Python and R packages for fitting neural networks for high-dimensional data https://github.com/jjfeng/easier_net https://github.com/jjfeng/easier_net_R
GapML	Python package for analyzing cell-lineage tracing data from GESTALT https://github.com/matsengrp/gestaltamania
SPINN	Python package for estimating sparse-input neural networks http://github.com/jjfeng/spinn
samm	Python package for estimating somatic hypermutation rates of nucleotide motifs http://github.com/matsengrp/samm

Teaching

2024-Present	Instructor, Datsci 224: Understanding Machine Learning: From Theory to Applications, UCSF
2024-Present	Instructor, Summer Institute in Statistics for Big Data (SISBID): Supervised Methods for Statistical Machine Learning, University of Washington
2025	Guest Lecture, Taiwan Smart Healthcare School, Department of Information Management, Taiwan Ministry of Health and Welfare
2021-2023	Instructor, Biostat 216: Machine Learning in R for the Biomedical Sciences, UCSF
2022	Lecturer, Epidemiology, Biostatistics and Population Science (EBPS), UCSF School of Medicine Bridges Curriculum
2020-Present	Instructor, Machine Learning Boot Camp: Analyzing Biomedical and Health Data, Columbia University
2020	Instructor, Supervised statistical learning, 6th Seattle Symposium in Biostatistics

Student Advising

2025-Present	Siyu Zhou, Postdoctoral researcher
2023-Present	Jinhee Lee, UCSF-UC Berkeley Computational Precision Health Designated Emphasis program, UCSF-UC Berkeley Bioengineering PhD program
2023-2025	Harvineet Singh, Postdoctoral researcher
Summer 2024	Shreya Nadagowda, High School Intern from UCSF Summer Researchers in Global Health
Spring 2022	Margaret Tsui, Biomedical Informatics PhD program, Qualifying Exam Committee
Summer 2022	Amanda Everitt, Biomedical Informatics PhD program, Qualifying Exam Committee

Faculty Advising

2023-Present	Andrew Bishara, Assistant Professor, K23 grant
2026-Present	Fan Xia, Assistant Professor, Department of Epidemiology and Biostatistics Artificial Intelligence/Machine Learning for Health Seed Grant

Service

Editor

2025-Present	Program Committee, Symposium on Artificial Intelligence in Learning Health Systems (SAIL)
2025-Present	Area Chair, Conference on Neural Information Processing Systems (NeurIPS)
2023-Present	Area Chair, Conference on Health, Inference, and Learning (CHIL)
2023-2025	Editor of Special Issue, Journal of Biopharmaceutical Statistics
2024-Present	Statistical Editor, New England Journal of Medicine Artificial Intelligence (NEJM AI)
2026-Present	Guest Editor of Special Collection on "Statistical Foundations of AI and Real-World Evidence Generation", Biostatistics

Referee Service
- BMJ Open Quality
- NEJM AI
- Journal of Machine Learning Research
- Conference on Neural Information Processing Systems
- NeurIPS Workshop on Distribution Shifts
- Frontiers in Digital Health
- Lancet Digital Health
- Nature Medicine
- International Conference on Machine Learning
- International Conference on Learning Representations
- Journal of Computational and Graphical Statistics
- Statistics in Biopharmaceutical Research
- Annals of Applied Statistics
- Annals of Statistics
- Statistics in Medicine

- Neural Networks
- ASA Section on Statistical Learning and Data Science Student Paper Committee
- Communications Medicine
- JAMA
- Nature Biomedical Engineering

Conferences
- Joint Statistical Meetings, Session Chair
- Western North American Region (WNAR) Annual Meeting, Session Chair
- Eastern North American Region (ENAR) Annual Meeting, Roundtable leader

University Service
- Department of Epidemiology and Biostatistics, Faculty Search Committee, Fall 2025
- UCSF Women in Tech for International Women's Day, March 2024
- UCSF "Implementation and Evaluation of AI in Real-World Clinical Settings" Seminar Series, Jan 2024–Present
- UCSF Artificial Intelligence Oversight Committee, March 2023–Present
- UCSF Artificial Intelligence/Machine Learning Demonstration Projects Steering Committee, Winter-Spring 2022
- UCSF Initiative for Digital Transformation in Computational Biology & Health Grant Review Committee, September 2021
- Department of Epidemiology and Biostatistics, Digital Health Initiative Steering Committee, 2020–Present
- Department of Epidemiology and Biostatistics, Admissions Committee for the Master's Degree in Health Data Science, 2022–Present

Work Experience

2019	**Research Intern**, *Insitro*, South San Francisco, CA
	Developed statistical models of genomic data.
2012–2015	**Software engineer**, *Coursera*, Mountain View, CA
	Built the professional certificate program and payment system. Technical lead on projects with 3-5 people. Mentored interns and junior engineers.

Other

Winter 2025	Guest speaker for Monta Vista Robotics Team Diversity in STEM Symposium
Summer 2023	Guest speaker for Kode with Klossy Summer program
2022-present	Guest lecturer for UCSF AI4ALL Summer program