

Asad Aali

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Education

- 2022 – 2024 **MS, Electrical & Computer Engineering**, UT Austin
Thesis: *Solving inverse problems with generative priors trained on corrupted data*
- 2021 – 2022 **MS, Information Technology**, UT Austin
Thesis: *Optimizing cloud usage with machine learning*
- 2015 – 2019 **BS, Accounting & Finance**, LUMS
Minor: *Computer Science*

Academic Employment

- 2024 – 2026 **Research Scientist**, Stanford University
Advisor: *Akshay Chaudhari*
- 2022 – 2024 **Graduate Research Assistant**, UT Austin
Advisor: *Jon Tamir*
- 2024 – 2024 **Graduate Teaching Assistant**, UT Austin
Course: *Linear Systems and Signals (ECE 313)*

Honors and Awards

- 2025 **Best Paper Award Candidate**, NeurIPS GenAI4Health
- 2024 **ECE Outstanding Student Fellowship**, UT Austin

Journal Articles

- 2025 **Robust multi-coil MRI reconstruction via self-supervised denoising**
Asad Aali, Marius Arvinte, Sidharth Kumar, Yamin I Arefeen, Jonathan I Tamir
Magnetic Resonance in Medicine (MRM)
- A dataset and benchmark for hospital course summarization with adapted large language models**
Asad Aali, Dave Van Veen, Yamin I Arefeen, Jason Hom, Christian Bluethgen, et al
Journal of the American Medical Informatics Association (JAMIA)
- MedHELM: Holistic evaluation of large language models for medical tasks**
Suhana Bedi, Hejie Cui, Miguel Fuentes, Alyssa Unell, Michael Wornow, et al
Nature Medicine
- Performance of large language model-generated spanish discharge material**
Eduardo Pérez-Guerrero, Asad Aali, Emanuel Irizarry, Nicole Corso, Jason Hom, et al
Journal of General Internal Medicine
- 2024 **Adapted large language models can outperform medical experts in clinical text summarization**
Dave Van Veen, Cara Van Uden, Louis Blankemeier, Jean-Benoit Delbrouck, Asad Aali, et al
Nature Medicine

Conferences / Workshops

- 2025
- **MedVAL: Toward expert-level medical text validation with language models**
Asad Aali, Vasiliki Bikia, Maya Varma, Nicole Chiou, Sophie Ostmeier, et al
Neural Information Processing Systems (GenAI4Health) - **ORAL (TOP 5%)**
 - **Patch-based diffusion for data-efficient, radiologist-preferred MRI reconstruction**
Rohan Sanda, Asad Aali, Andrew Johnston, Eduardo Reis, Jonathan Singh, et al
Machine Learning for Health (ML4H) - **SPOTLIGHT**
 - **MedFactEval and MedAgentBrief: A framework and workflow for generating and evaluating factual clinical summaries**
François Grolleau, Emily Alsentzer, Timothy Keyes, Philip Chung, Akshay Swaminathan, et al
Pacific Symposium on Biocomputing (PSB)
- 2024
- **Ambient diffusion posterior sampling: Solving inverse problems with diffusion models trained on corrupted data**
Asad Aali, Giannis Daras, Brett Levac, Sidharth Kumar, Alexandros G Dimakis, et al
International Conference on Learning Representations (ICLR)
 - **GSURE denoising enables training of higher quality generative priors for accelerated MRI reconstruction**
Asad Aali, Marius Arvinte, Sidharth Kumar, Yamin I Arefeen, Jonathan I Tamir
International Society for Magnetic Resonance in Medicine (ISMRM) - **ORAL**
 - **MIMIC-IV-BHC: Labeled clinical notes dataset for hospital course summarization**
Asad Aali, Dave Van Veen, Yamin I Arefeen, Jason Hom, Christian Bluethgen, et al
PhysioNet
- 2023
- **Solving inverse problems with score-based generative priors learned from noisy data**
Asad Aali, Marius Arvinte, Sidharth Kumar, Jonathan I Tamir
IEEE Asilomar Conference on Signals, Systems, and Computers
 - **Multi-contrast 3D fast spin-echo T2 shuffling reconstruction with score-based deep generative priors**
Sidharth Kumar, Asad Aali, Jonathan I Tamir
International Society for Magnetic Resonance in Medicine (ISMRM) - **ORAL**

Preprints

- 2025
- **Splitwiser: Efficient LM inference with constrained resources**
Asad Aali, Adney Cardoza, Melissa Capo
arXiv:2505.03763
 - **Conditional prior-based non-stationary channel estimation using accelerated diffusion models**
Muhammad Ahmed Mohsin, Ahsan Bilal, Muhammad Umer, Asad Aali, Muhammad Ali, et al
arXiv:2509.15182
- 2024
- **Automated detection of underdiagnosed medical conditions via opportunistic imaging**
Asad Aali, Andrew Johnston, Louis Blankemeier, Dave Van Veen, Laura T Derry, et al
arXiv:2409.11686

Invited Talks

- 2025
- **MedVAL: Medical Text Validation with Language Models**
Workshop on Machine Learning for Health, Apple
Biomedical Informatics Research Colloquium, Stanford University
AIMI Academic × Industry Connections Mixer, Stanford University
IBIIS and AIMI Retreat, Stanford University
AI+Biomedicine Seminar, Stanford University
Radiological Sciences Lab, Stanford University
Trustworthy AI Research Lab, Stanford University
Daneshjou Lab, Stanford University
 - **Optimizing Clinical Workflows using Language Models**
Guest Lecture, Austin Community College
 - **Advancing Healthcare with Machine Learning**
Research Talk, HOPPR
- 2024
- **Detecting Underdiagnosed Conditions via Opportunistic Imaging**
Radiology Retreat, Stanford University
 - **Splitwiser: Efficient LM Inference with Constrained Resources**
Lecture, UT Austin
 - **Generative Priors for Accelerated MRI Reconstruction**
Guest Lecture, Austin Community College
 - **Accelerated Multi-Coil MRI Reconstruction**
ECE Outstanding Student Series, UT Austin
 - **GSURE Denoising for Accelerated Multi-Coil MRI Reconstruction**
ISMRM, Singapore
- 2023
- **Hospital Course Summarization with Adapted Large Language Models**
Research Showcase, Amazon
 - **MIMO Channel Estimation with Priors learned from Noisy Data**
6G@UT Conference, UT Austin
 - **Solving Inverse Problems with Priors learned from Noisy Data**
IEEE Asilomar Conference, Pacific Grove
 - **Generative Priors for Solving Inverse Problems from Noisy Data**
IFML Workshop, University of Washington
- 2022
- **MIMO Channel Estimation using Score-Based Generative Models**
6G@UT Conference, UT Austin

Reviewer

- **Journals:** *Nature Scientific Reports, npj Digital Medicine*
- **Conferences:** *Machine Learning for Health (ML4H)*

Employment

- 2023 – 2023
- **Machine Learning Intern, Amazon**
- 2022 – 2022
- **Machine Learning Intern, Dell Technologies**
- 2020 – 2021
- **Data Analyst, Plutus21 Capital**
- 2019 – 2020
- **Data Analyst, EZO**