

Asad Aali




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Education

- 2022 – 2024  **University of Texas at Austin**
MS, Electrical & Computer Engineering
- 2021 – 2022  **University of Texas at Austin**
MS, Information Technology
- 2015 – 2019  **Lahore University of Management Sciences**
BS, Accounting & Finance






Employment

- 2024 – 2026  **Stanford University**
Research Scientist
- 2026 – 2026  **Apple**
Machine Learning Intern
- 2022 – 2024  **University of Texas at Austin**
Graduate Research Assistant
Graduate Teaching Assistant (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 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 Uden, Louis Blankemeier, Jean Delbrouck, Asad Aali, et al
Nature Medicine

Conferences

- 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%)**
 - **Prompt optimization improves robustness of language model benchmarks for medical tasks**
Asad Aali, Muhammad Ahmed Mohsin, Vasiliki Bikia, Arnav Singhvi, Suhana Bedi, et al
Machine Learning for Health (ML4H)
 - **PaDIS-MRI: 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**
 - **Best of both worlds: Combining general and clinical language models for classification and text generation**
Sasha Ronaghi, Asad Aali, Chloe Stanwyck, Miguel Fuentes, Tina Hernandez-Boussard, et al
Machine Learning for Health (ML4H)
 - **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 multi-coil 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
- **Structured prompting enables more robust evaluation of language models**
Asad Aali, Muhammad Ahmed Mohsin, Vasiliki Bikia, Arnav Singhvi, Richard Gaus, et al
arXiv:2511.20836
 - **Resolution-independent neural operators for multi-rate sparse-view CT**
Aujasvit Datta, Jiayun Wang, Asad Aali, Armeet Singh Jatyani, Anima Anandkumar
arXiv:2512.12236

Preprints (continued)

- **Prompt triage: Structured optimization enhances vision-language model performance on medical imaging benchmarks**
Arnav Singhvi, Vasiliki Bikia, **Asad Aali**, Akshay S. Chaudhari, Roxana Daneshjou
arXiv:2511.11898
- **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
- **Splitwiser: Efficient LM inference with constrained resources**
Asad Aali, Adney Cardoza, Melissa Capo
arXiv:2505.03763
- 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**
NeurIPS GenAI4Health, San Diego
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
- **Structured Prompting Enables Robust Evaluation of Language Models**
Machine Learning for Health (ML4H), San Diego
- **LLM Hallucinations: Causes, Detection, and Mitigation**
IBIIS Journal Club, 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

Invited Talks (continued)

- **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:** *npj Digital Medicine, Circulation, Nature Scientific Reports*
- **Conferences:** *CVPR, ML4H*

Past Employment

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