Asad Aali

Research Scientist, Stanford University

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Education

2022 – 2024 **MS, Electrical & Computer Engineering**, UT Austin.
Thesis: *Solving inverse problems with generative priors trained on corrupted data*
Advisor: *Jon Tamir*

2021 – 2022 **MS, Information Technology**, UT Austin.
Thesis: *Optimizing cloud usage with machine learning*
Advisor: *Alex Dimakis, Constantine Caramanis*

2015 – 2019 **BS, Accounting & Finance**, LUMS.
Minor: *Computer Science*

Research

1. **A. Aali**, M. Arvinte, et al. Robust multi-coil MRI reconstruction via self-supervised denoising. In: *Magnetic Resonance in Medicine* (2025).
2. **A. Aali**, G. Daras, et al. Ambient diffusion posterior sampling: Solving inverse problems with diffusion models trained on corrupted data. In: *International Conference on Learning Representations* (2025).
3. F. Grolleau, E. Alsentzer, et al. MedFactEval and MedAgentBrief: A framework and workflow for generating and evaluating factual clinical summaries. In: *Pacific Symposium on Biocomputing* (2025).
4. E. Pérez-Guerrero, **A. Aali**, et al. Performance of large language model-generated spanish discharge material. In: *Journal of General Internal Medicine* (2025).
5. **A. Aali**, M. Arvinte, et al. GSURE denoising enables training of higher quality generative priors for accelerated MRI reconstruction. In: *International Society for Magnetic Resonance in Medicine* (2024).
6. **A. Aali**, D. Van Veen, et al. A dataset and benchmark for hospital course summarization with adapted large language models. In: *Journal of the American Medical Informatics Association* (2024).
7. **A. Aali**, D. Van Veen, et al. MIMIC-IV-BHC: Labeled clinical notes dataset for hospital course summarization. In: *PhysioNet* (2024).
8. D. Van Veen, C. Van Uden, et al. Adapted large language models can outperform medical experts in clinical text summarization. In: *Nature Medicine* (2024).
9. **A. Aali**, M. Arvinte, et al. Solving inverse problems with score-based generative priors learned from noisy data. In: *IEEE Asilomar Conference on Signals, Systems, and Computers* (2023).
10. S. Kumar, **A. Aali**, et al. Multi-contrast 3D fast spin-echo T2 shuffling reconstruction with score-based deep generative priors. In: *International Society for Magnetic Resonance in Medicine* (2023).

Preprints

1. **A. Aali**, V. Bikia, et al. MedVAL: Toward expert-level medical text validation with language models. In: *arXiv:2507.03152*. 2025.
2. S. Bedi, H. Cui, et al. MedHELM: Holistic evaluation of large language models for medical tasks. In: *arXiv:2505.23802*. 2025.

3. M. A. Mohsin, A. Bilal, et al. Conditional prior-based non-stationary channel estimation using accelerated diffusion models. In: *arXiv:2509.15182*. 2025.
4. R. Sanda, **A. Aali**, et al. Patch-based diffusion for data-efficient, radiologist-preferred MRI reconstruction. In: *arXiv:2509.21531*. 2025.
5. **A. Aali**, A. Cardoza, et al. Splitwiser: Efficient LM inference with constrained resources. In: *arXiv:2505.03763*. 2024.
6. **A. Aali**, A. Johnston, et al. Automated detection of underdiagnosed medical conditions via opportunistic imaging. In: *arXiv:2409.11686*. 2024.

Invited Presentations

2025
- **MedVAL: Medical Text Validation with Language Models.**
  Workshop on Machine Learning for Health, Apple.
  Trustworthy AI Research Lab, Stanford University.
  Radiological Sciences Lab, Stanford University.
  AI+Biomedicine Seminar, 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.

Employment

2024 – **Research Scientist,** Stanford University.
2022 – 2024 **Research Assistant,** UT Austin.
2024 – 2024 **Teaching Assistant,** UT Austin.

Employment (continued)

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

Awards and Achievements

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