Asad Aali

Research Data Analyst, Stanford University

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Education

2022 – 2024	🔖	**MS, Electrical & Computer Engineering**, The University of Texas at Austin. Thesis: *Solving Inverse Problems with Generative Priors Trained on Corrupted Data.*
2021 – 2022	🔖	**MS, Information Technology**, The University of Texas at Austin. Thesis: *Optimizing cloud usage costs using Deep Learning-driven Transformer models.*
2015 – 2019	🔖	**BS (Honors), Accounting & Finance**, Lahore University of Management Sciences. Minor: *Computer Science.*

Research

Preprints

1. **A. Aali**, M. Arvinte, S. Kumar, Y. I. Arefeen, and J. I. Tamir, Enhancing deep learning-driven multi-coil mri reconstruction via self-supervised denoising, 2024.

2. **A. Aali**, G. Daras, B. Levac, S. Kumar, A. G. Dimakis, and J. I. Tamir, Ambient diffusion posterior sampling: Solving inverse problems with diffusion models trained on corrupted data, 2024.

3. **A. Aali**, A. Johnston, L. Blankemeier, D. Van Veen, L. T. Derry, D. Svec, *et al.*, Detecting underdiagnosed medical conditions with deep learning-based opportunistic ct imaging, 2024.

4. **A. Aali**, D. Van Veen, Y. I. Arefeen, J. Hom, C. Bluethgen, E. P. Reis, *et al.*, A dataset and benchmark for hospital course summarization with adapted large language models, 2024.

Journal Articles

1. D. Van Veen, C. Van Uden, L. Blankemeier, J.-B. Delbrouck, **A. Aali**, C. Bluethgen, *et al.*, Adapted large language models can outperform medical experts in clinical text summarization, *Nature medicine*, vol. 30, no. 4, pp. 1134–1142, 2024.

Conference Proceedings

1. **A. Aali**, M. Arvinte, S. Kumar, Y. I. Arefeen, and J. I. Tamir, Gsure denoising enables training of higher quality generative priors for accelerated multi-coil mri reconstruction, in *International Society for Magnetic Resonance in Medicine*, 2024.

2. **A. Aali**, M. Arvinte, S. Kumar, and J. I. Tamir, Solving inverse problems with score-based generative priors learned from noisy data, in *57th Asilomar Conference on Signals, Systems, and Computers*, IEEE, 2023.

3. S. Kumar, **A. Aali**, and J. I. Tamir, Multi-contrast 3d fast spin-echo t2 shuffling reconstruction with score-based deep generative priors, in *International Society for Magnetic Resonance in Medicine*, 2023.

Datasets

1. **A. Aali**, D. Van Veen, Y. I. Arefeen, J. Hom, C. Bluethgen, E. P. Reis, *et al.*, Mimic-iv-ext-bhc: Labeled clinical notes dataset for hospital course summarization, *PhysioNet*, 2024.

Talks

2024 **Detecting Underdiagnosed Medical Conditions with Opportunistic Imaging.**
Radiology Retreat, Stanford University.

Splitwiser: Efficient LLM Inference with Constrained Resources.
Lecture (ECE 382V), The University of Texas at Austin.

Generative Priors for Accelerated MRI Reconstruction.
Guest Lecture (COSC 4380), Austin Community College (ACC).

Accelerated Multi-Coil MRI Reconstruction.
ECE Outstanding Student Series, The University of Texas at Austin.

GSURE Denoising for Accelerated Multi-Coil MRI Reconstruction.
International Society for Magnetic Resonance in Medicine, Singapore.

2023 **Hospital Course Summarization with Adapted Large Language Models.**
Intern Research Showcase, Amazon.

MIMO Channel Estimation with Priors learned from Noisy Data.
6G@UT Conference, The University of Texas at 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, Seattle.

2022 **MIMO Channel Estimation using Score-Based Generative Models.**
6G@UT Conference, The University of Texas at Austin.

Awards and Achievements

2024 **ECE Outstanding Student Award**, The University of Texas at Austin.

Past Employment

2022 – 2024 **Research Assistant,** The University of Texas at Austin.

2023 – 2024 **Teaching Assistant,** The University of Texas at Austin.

2023 – 2023 **Research Intern,** Amazon.

2022 – 2022 **Machine Learning Intern,** Dell Technologies.

2020 – 2021 **Data Analyst,** Plutus21 Capital.

2019 – 2020 **Solutions Consultant,** EZOfficeInventory.