Asad Aali

Research Data Analyst, Stanford University

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Education

MS, Electrical & Computer Engineering, The University of Texas at Austin.
Thesis: Solving Inverse Problems with Generative Priors Trained on Corrupted Data.

MS, Information Technology, The University of Texas at Austin.
Thesis: Optimizing cloud usage costs using Deep Learning-driven Transformer models.

BS (Honors), Accounting & Finance, Lahore University of Management Sciences.

Minor: Computer Science.

Research

Preprints

- **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.
- **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.
- **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

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

- **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.
- **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.
- 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

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

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

Awards and Achievements

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.