

ASAD AALI

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Applied scientist with research interests lying at the intersection of Machine Learning, Computer Vision, and Generative AI

EDUCATION

The University of Texas at Austin 2022 - 2024
PhD in Electrical and Computer Engineering Overall GPA: 3.9

Coursework: Computer Vision, Computational MRI, Algorithms, Digital Signal Processing, Applied Probability, Numerical Analysis

The University of Texas at Austin 2021 - 2022
Master of Science in Information Technology Overall GPA: 3.9

Coursework: Machine Learning, Deep Learning, Natural Language Processing, Advanced Programming, Distributed Programming, Big Data, Database Systems, Computational Finance

Lahore University of Management Sciences 2015 - 2019
Bachelor of Science (Honours) in Accounting & Finance Overall GPA: 3.6

Minor: Computer Science

TECHNICAL SKILLS

<i>Programming Languages</i>	Python, MATLAB, R, C++, C, Java, JavaScript, Kotlin
<i>Machine Learning Technologies</i>	PyTorch, Tensorflow/Keras, Scikit-Learn, SigPy, SciPy, CUDA, Pandas
<i>Natural Language Technologies</i>	NLTK, GPT, BERT, VADER, spaCy, Word2Vec
<i>Database Technologies</i>	SQL (Oracle, MySQL, Postgres), NoSQL (MongoDB, Firestore), HDFS, S3, GCS
<i>Other</i>	Spark, Hadoop, PowerBI, Tableau, Git, Linux, AWS, Azure, GCP, Oracle Cloud

EXPERIENCE

The University of Texas at Austin - Graduate Research Assistant · Austin, TX May 2022 - Present

- Crafted a novel loss function using Stein's Unbiased Risk Estimate (SURE) for joint denoising and prior learning given noisy data (Github¹)
- Developed new algorithms for learning generative models from corrupted MRI data with subsampled forward operators (Github)

Amazon (One Medical) - Machine Learning Intern · Seattle, WA June 2023 - September 2023

- Initiated a clinical note summarization project and developed fine-tuned LLMs that outperformed clinician-written summaries (Github)

Dell Technologies - Data Science Intern · Austin, TX January 2022 - May 2022

- Developed an ML pipeline that reduced cloud usage costs by 15% using temporal fusion transformers (TFT) for time series forecasting

Plutus21 Capital - Software Engineer · Dallas, TX May 2020 - July 2021

- Led team of software engineers to capture real-time data from cryptocurrency exchanges into an Amazon RDS using REST APIs in Python

EZOfficeInventory - Solutions Consultant · Austin, TX May 2019 - May 2020

- Led onboardings and managed enterprise clients including Snap Inc. and Comcast as a data deployment specialist

PUBLICATIONS

1. **Asad Aali**, Marius Arvinte, Sidharth Kumar, and Jonathan I. Tamir. "Solving Inverse Problems with Score-Based Generative Priors learned from Noisy Data.", Asilomar 2023, Pacific Grove, CA, USA.
2. Dave Van Veen, Cara Van Uden, Louis Blankemeier, Jean-Benoit Delbrouck, **Asad Aali**, Christian Bluethgen, Anuj Pareek et al. "Clinical Text Summarization: Adapting Large Language Models Can Outperform Human Experts." arXiv preprint arXiv:2309.07430 (2023).
3. Sidharth Kumar, **Asad Aali**, and Jonathan I. Tamir, "Multi-Contrast 3D Fast Spin-Echo T2 Shuffling Reconstruction with Score-Based Deep Generative Priors.", ISMRM 2023, Toronto, ON, Canada.
4. Sidharth Kumar, **Asad Aali**, and Jonathan I. Tamir, "T2 Shuffling Fast 3D Spin-Echo Reconstruction with Score-Based Generative Modeling.", ISMRM 2023 Workshop on Data Sampling & Image Reconstruction, Sedona, AZ, USA.