

Sualeh Ali

smsali97@gmail.com | github.com/smsali97 | sualehsayssalam.com

Education

Rochester Institute of Technology (RIT) — M.S. in Data Science

May 2024

- GPA: 3.90/4.00; Thesis: *Vicarious Interaction Annotation with LLMs for Peace Promotion*
- Course Highlights: Advanced NLP, Deep Learning, Computer Vision, Advanced Algorithms

Institute of Business Administration (IBA), Karachi — B.S. in Computer Science

August 2020

- GPA: 3.90/4.00 (Gold Medalist); Teaching Assistant: Algorithms Data Structures

Publications

Dutta, A., **S. Ali**, U. Naseem, A. R. KhudaBukhsh. (2025). "Towards a Bipartisan Understanding of Peace and Vicarious Interactions." *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*. (Forthcoming)

Ali, M.S., Tariq, M.M., Ahmed, A., Soomro, A.R., Syed, D. (2023). "A Comparative Analysis of Supportive Navigation on Movie Recommenders." *arXiv preprint arXiv:2311.13494*.

Research & Professional Experience

Senior AI Engineer, Careem GenAI Team

Jan 2025–Present *Dubai, UAE*

- Architected and deployed novel RAG-based workflows for customer-care automation using LangChain and OpenAI APIs, reducing average resolution time by 40%.
- Designed fault-tolerant storage and indexing solutions on DynamoDB and S3 for high-throughput embedding retrieval across 10M+ documents.

Visiting Faculty, Institute of Business Administration (IBA), Karachi

Spring 2025

- Taught undergraduate course: *Introduction to Computer Vision*, developing curriculum, lectures, and assignments on foundational and modern deep learning techniques.

AI Engineer (Senior SDE R&D), Afiniti

Jul 2024–Dec 2024 *Virginia, USA*

- Optimized a pairing engine by 30% by migrating data processing to Polars and parallelizing feature extraction pipelines over Spark clusters.

Graduate Assistant & Researcher, Rochester Institute of Technology

2022–2024

- **Graduate TA (Software for Data Science):** Mentored students, graded assignments, and conducted research on software engineering practices in data science workflows.
- **Research Assistant (Social Insight Lab):** Led research on de-escalation language detection, developing Transformer-based classifiers (BERT) achieving an F1 score of 0.87.
- **STEP CS Tutor:** Assisted students from under-represented groups in foundational computer science and programming courses.

Software Engineer, Airlift Technologies

Jul 2020–Jan 2022 *Lahore, PK*

- Developed core distributed modules (e.g., Order Batching) in Node.js and Python, supporting 10k+ daily orders with 20% lower latency.
- Led a team of 7 in migrating a monolith to microservices on AWS (ECS, SQS, RDS), improving system scalability and fault tolerance.

Selected Projects

Spatiotemporal analysis of DDoS and FlashCrowds

github.com

- Employed SARIMAX time series modeling and IP address clustering with Hilbert curves to discern between network phenomena.

From Ghazals to Sonnets: A Polysemic Case Study

overleaf.com

- Leveraged LLMs, word embeddings, and topic modeling for comparative analysis of Urdu and English poetry.

PocketFS: Distributed File System

github.com

- Built a multi-client, fault-tolerant DFS from scratch in Golang React supporting RPCs, UDP multicast, and automated failure detection.

Automate (HackHarvard'22)

devpost.com

- Built an automated job tracking system that ingested, parsed, and classified job-related emails using Naive Bayes with 92% recall. [*NLTK, Python, GCP, React*]

Skills

Languages: Python, Java, C++, Go, SQL, JavaScript **ML/DS:** PyTorch, TensorFlow, LangChain, OpenAI SDK, Scikit-learn, Polars, NLTK, OpenCV **Systems & Cloud:** AWS (Lambda, ECS, S3, DynamoDB), Kubernetes, Docker, Spark, Kafka, Terraform, GCP **Algorithms Theory:** Distributed Algorithms, Optimization, Data Structures, System Design, Time Series Analysis