

Sualeh Ali

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Education

Rochester Institute of Technology (RIT) — M.S. in Data Science	May 2024
• GPA: 3.90/4.00; Thesis: <i>Vicarious Interaction Annotation with LLMs for Peace Promotion</i>	
• 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." <i>Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)</i> . (Forthcoming)	
Ali, M.S., Tariq, M.M., Ahmed, A., Soomro, A.R., Syed, D. (2023). "A Comparative Analysis of Supportive Navigation on Movie Recommenders." <i>arXiv preprint arXiv:2311.13494</i> .	

Research & Professional Experience

Senior AI Engineer, Careem GenAI Team	Jan 2025–Present <i>Dubai, UAE</i>
• 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: <i>Introduction to Computer Vision</i> , developing curriculum, lectures, and assignments on foundational and modern deep learning techniques.	
AI Engineer (Senior SDE R&D), Afiniti	Jul 2024–Dec 2024 <i>Virginia, USA</i>
• 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 <i>Lahore, PK</i>
• 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