

Sibtain Ahmed

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Education

Iowa State University 	Aug 2025 – Present Ames, IA
PhD in Computer Science (MS expected Spring-2027)	
<u>Research focus:</u> Using mathematical attribution techniques to reason about the impact of training data on LLM predictions in reinforcement learning based fine-tuning, improving transparency and interpretability.	

NED University of Engineering & Technology 	Oct 2020 – Aug 2024 Karachi, Pakistan
BE Computer Systems Engineering (CGPA: 3.61/4.00)	

Professional Experience

GoodCore 	Nov 2024 – Jun 2025 Karachi, Pakistan
Software Engineer	
<ul style="list-style-type: none">Led the development of BriefingHelper, an AI-powered data assistant integrated into BriefingSource , enabling non-technical users to query internal data in natural language, eliminating complex filters and manual SQL queries, cutting retrieval time from minutes to seconds.Built and deployed RESTful APIs using FastAPI, capable of handling 1,000+ concurrent users, and developed a Streamlit microservice leveraging LLM tool-calling, PgVector based retrieval (RAG), and PostgreSQL, improving query accuracy and reducing hallucination by ~50%.Developed a real-time tracking module to monitor token usage, API calls, and database queries, optimizing resource allocation and minimizing operating costs.Reduced LLM inference cost and latency by 40% by splitting a large model call into two optimized stages for SQL generation and response formatting.Containerized and deployed services via Docker, ensuring seamless integration and scalable operation within AWS infrastructure.Enhanced model reliability through prompt engineering, feedback-driven tuning, and continuous evaluation, driving adoption across multiple BriefingSource clients.	

KoderLabs 	Aug 2023 – Oct 2023 Karachi, Pakistan
Software Engineering Intern	
<ul style="list-style-type: none">Contributed in integration of REST APIs for three Web and Android apps using React-Query, Next.js, React Native, and TypeScript, improving data flow consistency and UI responsiveness.Built state management, error-handling, and modular component logic, increasing client reliability and reducing load times by ~20%.Collaborated in Agile sprints with design, backend, and QA teams, engaging in pair programming and test-driven development to enhance code quality, version control practices, and cross-functional coordination.	

Projects

Dialogify (FYP, Startup) 	
AI-powered Cloud Orchestration & Monitoring Solution	
<ul style="list-style-type: none">Implemented an AI chatbot interface to automate AWS/GCP workflows, enabling non-technical users to deploy VMs through natural language prompts, reducing deployment time by 70% and steps from 11 to 4.Integrated Next.js frontend with optimized PostgreSQL backend, implementing tag-based IaC search that improved retrieval speed by ~50% and enhanced overall data handling efficiency.Technologies: Next.js, FastAPI, AssistantAPI, Zilliz Cloud, Postgres, Cloud Run (GCP)	

BrainWash 	
Laundry Solution App for University Students	
<ul style="list-style-type: none">Redesigned the project architecture, improving system scalability and reducing average response time by 45%.Introduced dedicated contexts and APIs to enhance Customer and Washer functionalities, improving user experience and reducing the need for manual intervention by 30%.	

- **Technologies:** React Native, React Query

Othello AI Agent

Heuristic and Rule-Based Game Decision System

- Built an AI agent for Othello using minimax with alpha-beta pruning and heuristic evaluation to optimize move selection.
- Enhanced search efficiency with adaptive depth control for faster real-time decision-making.
- **Technology:** NumPy, Flask, JavaScript, Bootstrap

Achievements

- Winner – **TechFest'2024 Speed Programming:** Secured 1st place among 40+ teams in an algorithmic problem-solving competition. ☺
- Section Leader – **Stanford Code-in-Place 2025:** Selected to lead and mentor global participants in Python programming and Problem-Solving fundamentals. ☺
- Top 15% – **LeetCode Contest Ranking:** 8 Profile badges recognized for advanced problem-solving and algorithmic proficiency. ☺
- **GRE Quantitative Reasoning – Perfect Score (170/170, 94th Percentile Overall):** Demonstrated exceptional quantitative skills. ☺
- 95th Percentile – **National Standardized Quality Measurement Test:** Demonstrated exceptional analytical aptitude. ☺
- **Harvard Puzzle Day 2025:** Solved 9/9 puzzles, ranked among top teams in logical reasoning & collaboration. ☺

Volunteer and Teaching Experience

Graduate Teaching Assistant ☺

Aug 2025 – Present | Ames, US

Introduction to Programming and Problem Solving – COMS 1270

- Mentoring and guiding 65+ students in Python programming and problem-solving, providing support through labs, office hours, and individualized feedback.
- Facilitate understanding of algorithms and coding concepts, improving student engagement and learning outcomes in a large classroom setting.

Moderator & Trainer – iCodeGuru ☺

Oct 2023 – Jul 2025

- Delivered a 3-month GRE course to underprivileged students, significantly improving participants' quantitative and verbal skills.
- Conducted multiple comprehensive GRE workshops and DSA & LeetCode sessions, guiding students in competitive programming and exam strategies.

Co-founder – QubtiCoders ☺

Nov 2023 – Jul 2024 | NED UET, Karachi

- Established a competitive programming community of 100+ members, promoting engagement in algorithms, contests, and coding challenges.
- Organized workshops, mentorship sessions, and coding competitions to strengthen peer learning and skill development.

Skills

Languages: Python, JavaScript (ES6+), TypeScript, Java, PHP, SQL, Verilog, CUDA

Backend & Frameworks: FastAPI, Flask, Laravel, RESTful APIs, OpenMP, MPI, Docker, Gunicorn, Uvicorn, PostgreSQL, MySQL, GCP Cloud Run

Web & Mobile: React.js, Next.js, React Native, Redux, React Query, Tailwind CSS, HTML5, CSS3, Bootstrap 5, Chakra UI, Ant Design

AI & ML: LangChain, OpenAI/Anthropic/Gemini API, Hugging Face Transformers, Qdrant, pgvector, Scikit-learn, Retrieval-Augmented Generation (RAG), Tool-Calling, Pandas, NumPy, Matplotlib, AWS Bedrock

Development & Collaboration: Git, GitLab, Bitbucket, Microservices Architecture, Containerization, Prompt Engineering, Agile Methodologies