Danish Javed

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ACADEMIC DETAILS

B.Tech Computer Science & Engineering **CGPA: 8.469**
Indian Institute of Technology Delhi 2020-2024

WORK EXPERIENCE

Software Engineer, Silence Laboratories *Mar '25 - Present*
Python, Rust, AI Agents, A2A, MCP, Web Scraping

- Single-handedly researched A2A protocol released by Google and suggested additions on it to support secure collaboration. Using it, made PSI and Dark Pools (privacy preserving trading) demos featuring multiple agents
- Engineered robust Python FFI bindings for Rust cryptographic libraries and architected an enterprise-grade MCP server implementing secure Private Set Intersection, and submitted it in in the NANDA MIT hackathon

Software Engineer Intern, Kognitos, Inc. *Sep '24 - Feb '25*
Python, Cython, LLMs, AWS, Docker, Prompt Engineering

- Restructured core parsing infrastructure by implementing advanced LLM-based POS tagging algorithms, achieving 28% accuracy improvement (75% to 96%) and significantly reducing customer support tickets
- Optimized critical production systems by converting 15K+ lines of Python to Cython C-extensions, delivering 5x performance improvement (80% runtime reduction) and reducing infrastructure costs

Research Intern, Adobe Research, India Demo *Summer '23*
Python, NLP, Data Scraping, Socratic models, Multi-modal transformers

- Pioneered an intelligent AI orchestration system for automated document enhancement, enabling seamless content retrieval and integration from heterogeneous external sources, reducing manual effort by 90%
- Developed and fine-tuned a custom BERT classifier for complex image decision tasks, achieving 80.4% accuracy and outperforming GPT-3.5 by 58% (51% baseline), demonstrating superior domain-specific performance
- Engineered a comprehensive multi-modal dataset by implementing large-scale Wikipedia scraping infrastructure, creating 10K+ high-quality image-text pairs in structured XML format
- Implemented robust evaluation pipeline using DocNLI framework for text entailment assessment and delivered production-ready GUI application in PyQt5 for stakeholder demonstrations

RELEVANT COURSES

Machine Learning for Computer Networks, Computer Graphics, Numerical Algorithms, Advanced Algorithms, Computer Networks, Artificial Intelligence, Operating Systems, Computer Architecture, Parallel & Distributed Programming, Discrete Mathematics, Prob. & Stochastic Processes, Linear Algebra, Linear Optimization

Online Courses

AWS Cloud Technical Essentials, Migrating to the AWS Cloud, Fundamentals of AI Agents Using RAG and LangChain, Get started with Redis, Redis for Python Developers, Fundamentals of Backend Engineering

TECHNICAL SKILLS

- **Programming Languages**: Python, C++, Rust, JavaScript
- **AI/ML & Data Science**: PyTorch, Tensorflow, Keras, OpenCV, CUDA, LLMs
- **Systems & Infrastructure**: Docker, Redis, AWS, Git, REST APIs, MERN Stack
- **Leadership & Soft Skills**: Cross-functional collaboration, End-to-end ownership, Communication

HONORS AND ACHIEVEMENTS

- Secured **All India Rank 69** in JEE Advanced 2020 among 150K+ candidates, placing in top 0.03% nationally
- Secured **99.82 percentile** in CAT 2024 among 300K+ candidates with zero preparation
- **National-level Olympiad Qualifier**: Successfully cleared prestigious olympiads including **RMO, NSEA, NSEC and KVPY SA & SX**
- **International Recognition**: Earned **bronze medal** at **OPhO 2020** finishing 18th across 340 global teams of high school and UG students. This competition is sponsored by top firms like **Jane Street, Citadel, etc.** and is conducted by **PhysOly**

PROGRAMMING ACHIEVEMENTS

- **Algorush**: Stood **top 15** nationally in a competitive programming contest organised by **IISc, Bangalore**
- **Codeforces**: Solved **250+** algorithmic problems on **Codeforces** with **peak rating of 1637 (youwoo)**, demonstrating strong problem-solving and optimization skills
- **Leetcode**: Completed **250+** advanced coding challenges on **Leetcode (lemonwatermelon)**, covering data structures, dynamic programming, and system design

RELEVANT PROJECTS

Advanced Ray Tracing Engine Link
Computer Graphics, Prof. Rahul Narain - C++

- Built a high-performance ray tracing engine from scratch using OpenGL and C++, implementing advanced keyframing algorithms with real-time cloth physics simulation and dynamic obstacle collision detection. Achieved photorealistic rendering with SDL2 featuring complex affine transformations, soft shadows, and caustics

High-Performance Cache Simulator Link
Computer Architecture, Prof. Rijurekha Sen - C++

- Architected a sophisticated 2-level cache hierarchy simulator (L1/L2) in C++ with set-associative mapping, LRU replacement policy and Write-Back-Write-Allocate protocols for dirty block management. Designed comprehensive performance analytics tracking reads, writes, and miss rates with cycle-accurate timing simulation

PSP Network
Computer Networks, Prof. Abhijnan Chakraborty - Python

- Created a PSP network (similar to BitTorrent) that distributes the requested file to all peers, beginning with some file chunk distribution among them. Implemented both TCP and UDP connection networks between servers and clients, guaranteeing adequate packet loss management as well as parallel processing via multi-threading.simulation

Pacman-like IITD Campus Multiplayer Game
Design Practices, Prof. Rijurekha Sen - C++

- Created an interactive, two-player game from the ground up in C++ using SDL to manage IO and render visuals and animation. By limiting memory utilisation and data transfer, effective socketing has been implemented to enable fluid gameplay via wifi.

CO-CURRICULAR ACTIVITIES

- Mentored freshmen students in the course **Introduction to Chemistry** throughout the semester
- Core Team Member of **ACES-ACM IITD**: Organised events and managed club activities
- Winner of several **chess** tournaments in IITD; some word games tournaments like **Wordle**; did **swimming**