

ALI ABDULLAH

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EDUCATION

FAST NUCES Islamabad

2023-2027

BS Computer Science

- **Relevant Coursework:** Data Structures, Basic Algorithms, Computer Architecture, Operating Systems, Parallel Distributed Computing, Linear Algebra, Discrete Mathematics, Software Engineering, Calculus 2 & 3, Probability & Statistics

WORK EXPERIENCE

Nayatel

Jun 2025-July 2025

Web Development Intern

- Developed and integrated AI-powered web application features using Large Language Models (LLMs) and API-based services
- Built frontend and backend components enabling natural language interactions between users and AI systems
- Collaborated on full-stack development workflows involving database operations, backend logic, and responsive UI components

Lab Demonstrator

Aug 2025-Jan 2026

Lab demonstrator

- Assisted students in debugging Assembly Language and Computer Architecture lab assignments in real time
- Guided students on low-level programming concepts, memory operations, instruction execution, and processor architecture
- Reinforced technical understanding by supporting lab evaluations and troubleshooting programming issues

PROJECTS

Fastpapers | *Typescript, NextJS, Postgresql, tailwind*

- Built a centralized web platform for uploading, reviewing, and distributing university past examination papers
- Implemented an admin approval workflow to moderate uploaded content before publication
- Designed searchable and downloadable content management functionality for improved student accessibility

Auto-Quiz Generator | *Python, Scikit-Learn, XGBoost, NumPy, Pandas*

- Built an end-to-end machine learning pipeline that automatically generates quizzes
- Engineered a high-speed TF-IDF vectorization pipeline using sparse matrices
- Evaluated Logistic Regression, LinearSVC, Gaussian Mixture Models, Label Propagation, Random Forest, and XGBoost models for answer ranking and prediction

Stained Glass | *Python, Numpy, openCV, scipy, matplotlib*

- Transformed high resolution images to stained glass art using k-means and voronoi tessellation
- Implemented a manual Canny Edge Detector and integrated SciPy's KD-Tree for highly efficient spatial partitioning, achieving accurate geometric sharding and intelligent mean-color palette snapping.

QueryAI | *Langchain, NextJS, mongoDB, nodejs*

- Developed an AI-powered web platform using LangChain and LLMs to convert natural language prompts into executable SQL queries for simplified database interaction.

SKILLS

- **Languages:** Python, C++, C, Java, Javascript, Typescript, HTML, CSS, SQL, Bash
- **Technologies:** React.js, Node.js, Next.js, MongoDB, , Pandas, Linux, Git, CUDA, OpenCL
- **Tools:** Git, Postgres, MongoDB, Supabase, Figma, Vercel, Jupyter
- **Concepts:** Software Engineering, Frontend, Backend, Data Analysis, Machine Learning