

# Rai Tabish

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## Skills

- Python | Java | JavaScript | TypeScript | Solidity | C++ | C | MySQL | Node | Express | React | NoSQL | Git | GO | HTML | CSS | PyMC3
- AWS | Azure | Airflow | ETL Pipeline | Blockchain | WebScraping | llama | OpenAI | CI/CD | Unit Testing | OOP | Unity | Docker | DSA | Figma
- Kali Linux | Bash | Pytorch | LangChain | Deep Learning | Unsupervised Learning | Statistical Modeling | Tensorflow | OpenCV | MLOPS | GenAI | NLP
- English, Urdu

## Education

**Bachelor of Computer Science** **FAST NUCES** **Islamabad, Pakistan** **09/2021 - 04/2025**

## Work Experience

**Technology Program Intern** **Knodemy, Islamabad** **09/2024 - 1/2025**  
**Full Stack**

- **Designed, Developed, and Deployed** an in-house Learning Management System using the MERN stack (MongoDB, Express.js, React, Node.js) and AWS services, works on automating the lecture delivery with AI avatars and integrating custom LLM.
- **Collaborated with Students** to identify and address distractions by integrating a compiler and Scratch programming environment, thereby improving user engagement and the overall learning experience.

**CS Lab Demonstrator** **FAST-NUCES, Islamabad** **01/2022 - 3/2023**  
**Programming fundamentals**

- **Conducted and Managed** weekly lab sessions for over 50 students in the Programming Fundamentals (C++) course, ensuring comprehensive understanding and hands-on practice of core programming concepts on linux environments.
- **Earned Consistently Positive Feedback** from students by effectively communicating complex topics and providing personalized support, thereby was offered the lab for the fall session in next semester too.

**Freelance Software Developer** **AVVA Dynamics, California** **03/2023 - 01/2024**  
**Computer vision**

- **Designed and Developed an Advanced Surveillance System** integrating thermal cameras, telescopes, and standard cameras using OpenCV, and implementing object detection using YOLO.
- **Led a Development Team** for the Coin612 camera project, coordinating the seamless integration of hardware and software components. Ensured project milestones were met on time, resulting in a robust and reliable surveillance solution.

## Projects

**DataKaleidos: AI-Driven CPG Data** **LinkedIn** **03/2024**  
**IntelligencePlatform(FYP)**

- Automated the creation of a dynamic knowledge graph using Llama 3, organizing and connecting self scraped knowledge rich CPG data for seamless insights and intuitive querying.
- Built a scalable ETL pipeline leveraging Apache Airflow to automate data extraction, transformation, and loading, streamlining data integration.
- Developed GraphRag, an AI-powered system that uses advanced NLP to provide natural language querying capabilities, with the knowledge graph serving as its core data backbone.

**Blockchain Assistant** **GitHub** **11/2024**

- Developed a lightweight, CPU-optimized assistant using a quantized Llama 2 model. The model is fine-tuned on a Blockchain book to answer domain-specific questions efficiently on devices without GPU support.

<b>Genetic Algorithm Timetable Optimization</b>	<a href="#">GitHub</a>	04/2023
<ul style="list-style-type: none"> <li>Developed and Implemented a Genetic Algorithm-based system for AI project to optimize university timetables, effectively minimizing conflicts in course assignments, room allocations, and professor availability by leveraging techniques such as crossover, mutation, and adaptive penalty adjustments.</li> </ul>		
<b>SocioSphere: Society Management System</b>	<a href="#">GitHub</a>	12/2022
<ul style="list-style-type: none"> <li>Engineered an interactive Society Management System with ER diagrams, using SQL, Oracle, ASP.NET, CSS, and HTML.</li> <li>Integrated robust database concepts and advanced web programming to optimize society management and administration efficiency. Designed and implemented in accordance with design patterns.</li> </ul>		
<b>Urban Drive: Car Rental Website</b>	<a href="#">GitHub</a>	03/2024
<ul style="list-style-type: none"> <li>Utilized HTML, CSS, JavaScript, and ReactJs to create a visually appealing and user-friendly interface for the car rental platform.</li> <li>Implemented dynamic content loading and form validation to optimize user interaction and ensure data accuracy throughout the booking process.</li> </ul>		

## Activities & Achievements

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- Volunteer:** Helping Knodemy deliver computer lessons to underprivileged student of pakistan in remote areas (9/2024)
- Dean's List - FAST NUCES Islamabad (Spring 2025)**
- Organizer:** Lead in organizing the 2023 university orientation for the new batch.(10/2023)
- Best Bait Bazi:** Received this by Bazm-e-Paigham Rawalpindi with over 50+ colleges participating. (01/2019)
- Best Urdu Debater:** Inter-college debating competition with the topic of 'Education Builds the Nations'. (05/2013)
- Head of Sponsorship- FAST Computing Society:** Oversaw the sponsorship team for computing events. Communicated with companies to collaborate on events. (01/2022-08/2023)
- Head Urdu- FAST Literary Society:** Oversaw the planning and execution for urdu literature events. (08/2021-06/2023)

## Certifications

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<b>Programming with JavaScript</b>	<a href="#">Meta</a>	09/2024
<b>AWS Essentials Specialization</b>	<a href="#">AWS</a>	In-Progress
<b>Generative AI with LLM</b>	<a href="#">Deeplearning.ai</a>	02/2025
<b>Machine Learning Specialization</b>	<a href="#">Stanford</a>	In-Progress
Supervised Machine Learning (completed), Advance Learning Algorithms, Unsupervised Learning, Reinforcement Learning		
<b>Understanding Microsoft Azure</b>	<a href="#">DataCamp</a>	08/2024
<b>Neo4j Fundamentals</b>	<a href="#">GraphAcademy</a>	08/2023
<b>Intermediate SQL</b>	<a href="#">DataCamp</a>	07/2024
<b>Google AI essentials</b>	<a href="#">Google</a>	04/2024