Abdul Rafay Ather

FAST NUCES

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in LinkedIn ⌗ GitHub 🌐 Portfolio

Professional Summary

Software Engineering graduate with proven expertise in **machine learning**, **data science**, and full-stack development. Proficient in building and deploying **ML pipelines**, leveraging **signal processing** and **audio analysis** to deliver data-driven solutions at scale. Strong foundation in **Python**, **Scikit-learn**, and applied **AI/ML workflows**, with hands-on experience in scalable **REST API** development and cloud deployment using **Docker** and **AWS**.

Education

Bachelor of Science in Software Engineering   **FAST NUCES**

National University of Computer and Emerging Sciences

Graduation: December 2025

Experience

Software Engineer Intern   **Ended: Jan 2026**

Softsinc (Remote)

Collaborated within a cross-functional team to architect, build, and deliver production-grade web applications across the full stack - from crafting responsive **React.js** interfaces and integrating **REST APIs** to implementing **backend logic**, **database operations**, and resolving performance bottlenecks in live client systems.

Projects

SoundTab - Audio to Guitar Tablature System   **Final Year Project**

Repo Link

- Engineered an end-to-end **ML pipeline** for automatic guitar audio transcription, leveraging **Librosa** for **signal processing** and feature extraction.
- Applied **pitch detection** algorithms combined with **onset detection** to isolate note events from raw recordings, mapping them to symbolic music representations.
- Generated structured **MIDI** and **MusicXML** outputs, enabling accurate notation rendering and instrument playback.
- Deployed a **FastAPI** backend to serve model inference and expose **audio processing** endpoints to the front-end interface.

Web Scraping and Data Visualization Automation   **Data Science Project**

Repo Link

- Built automated **web scraping** pipelines in **Python** to collect and structure large volumes of real-world data across multiple sources.

- Performed **data cleaning** and **preprocessing** with **Pandas** and **NumPy**, resolving inconsistencies and preparing records for downstream analysis.

- Produced interactive **data visualizations** to surface trends and support data-driven insights, applying **EDA** techniques across diverse datasets.

Software Engineering Internship Projects   **Industrial Projects**

- **wirkaufendeinauto.de**   **Live Link**
  Vehicle data management platform featuring automated listings and real-time pricing workflows.

- **Bella's Art Studio**   **Live Link**
  Portfolio and booking platform with dynamic content rendering and media integration.

- **Results Coaching**   **Live Link**
  Client-facing coaching portal with session management and lead generation features.

- **LLM Automations**   **Live Link**
  CRM and workflow automation dashboard integrating third-party APIs and LLM-powered business operations.

Web Engineering and Application Projects   **Front-End Projects**

- 3D Web Components   **Live Link**
- Reservation Platform   **Live Link**
- Electric Vehicle Website   **Live Link**
- Audio Streaming Website   **Live Link**
- JavaScript Animations   **Live Link**

Technical Skills

Software Engineering: Object-Oriented Programming, Data Structures, Algorithms, System Design, C, C++, Java, Git, Jira, Bitbucket

Full Stack Development: HTML5, CSS3, JavaScript, React.js, Next.js, Node.js, FastAPI, REST APIs, SQL, MongoDB, Docker, AWS

Machine Learning & Data Science: Python, NumPy, Pandas, Librosa, Scikit-learn, TensorFlow, ML Pipelines, Signal Processing, Feature Engineering, EDA, NLP, Kubernetes, Jenkins, JMeter

Certifications

- Data Science (B1), Forge - British Airways   **Verified**
- Advanced Styling with Responsive Design, Coursera   **Verified**