Abdul Rafay

Software Engineer

+92 3115781747 abdulrafay1747@gmail.com **Rawalpindi**

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Professional Summary

Full-stack Software Engineer with internship experience in web, mobile, and backend development. Proficient in .NET, Flutter, C++, Python, and MERN stack. Skilled in writing clean, maintainable code and following Agile and DevOps practices. Eager to grow in a dynamic, real-world environment.

Experience

Intern, InternnCraft **June 2024 – August 2024**

- Developed and deployed cross-platform mobile applications using Flutter and Dart,
- Implemented responsive UI designs with custom animations and transitions .
- Integrated Firebase Authentication, Cloud Firestore, and Realtime Database for seamless backend operations and data synchronization.
- Constructed RESTful API interfaces to connect with external services, implementing efficient error handling and caching strategies.
- Utilized Git for version control and implemented CI/CD pipelines to streamline the development and deployment process.

Technical Skills

- **Programming Languages:** C++, C#, Python, Dart, Java, JavaScript, SQL
- **Frameworks & Libraries:** HTML, CSS, ASP.NET Core, Razor Pages, React.js, Express js, Next js, Nest js, Flutter, Flask, FastAPI
- **Tools & Platforms:** Visual Studio, Git, GitHub, Jenkins, Docker, AWS
- **Databases & Cloud Storage:** SQL Server, MySQL, MongoDB, Firebase (Firestore)

Projects

LeafSpec: AI-Powered Plant Species Identification API (Flask, MongoDB, Modelbit, TensorFlow)

- Built a RESTful microservice that classifies plant species from leaf images by invoking a cloud-hosted AlexNet model through Modelbit, returning predictions and confidence scores in real time.
- Structured endpoints with Flask Blueprints for authentication (email & Google OAuth), species search, favorites management, and user feedback, delivering a clean, modular API surface.
- Designed flexible MongoDB schemas for users, species metadata, and feedback, enabling fast queries by common or scientific name and seamless user preference storage.
- Implemented robust image-preprocessing and inference pipeline using Pillow and NumPy, achieving efficient on-the-fly transformations within the prediction service.
- Containerized and deployed the service via Nixpacks and Gunicorn, providing a reproducible, scalable production environment with full CORS support.

SOW Parts App (Next.js, NestJS, React Native, MySQL)

- Developed a cross-platform system for automotive parts procurement, targeting maintenance centers, drivers, and suppliers.
- Built a responsive web portal using Next.js for user onboarding, quote approvals, and order tracking.
- Designed a React Native mobile app for seamless order placement, supplier communication, and real-time delivery updates.
- Implemented a robust backend using NestJS and MySQL to handle user roles, inventory management, and order lifecycle.
- Built an admin panel for user approval and supplier/driver management.

Homeschooling Resource Hub (React, HTML, CSS)

- Developed a comprehensive platform to manage and distribute homeschooling resources for diverse user groups.
- Designed age-, class-, and region-based categorization to streamline content accessibility for parents, teachers, and students.
- Built a dual-interface system with an admin dashboard for content uploading and moderation.
- Created a responsive public-facing landing page featuring advanced filtering for easy resource discovery.

SBMTech Cybersecurity Consultancy Website (Next.js, TypeScript, Tailwind CSS, MailerSend)

- Built a responsive, multi-page consultancy website with modern UI using Next.js 15 and Tailwind CSS.
- Integrated real-time cybersecurity news feeds and dynamic service pages for various security offerings.
- Implemented contact form with server-side MailerSend API, including validation and error handling.
- Developed reusable UI components and custom styling for a professional, mobile-friendly experience.

Online Courses & Certifications

- LangChain for LLM Application Development (Feb. 2025) DeepLearning.AI

Education

FAST NUCES, Islamabad **2021-2025**

Bachelor of Science in Computer Science (BSCS)