

Abdul Rafay

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Bachelor of Science in Computer Science (BSCS)

Data Scientist | Machine Learning Engineer | Full Stack Developer

 Riyadh, Saudi Arabia

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Career Summary

Analytical and detail-oriented **Data Scientist & Full Stack Engineer** with 3+ years of experience in **backend architecture, machine learning, AI automation, and full-stack development**. Skilled in building scalable APIs, deploying data-driven applications, integrating AI automation, and developing workflow solutions to enhance operational efficiency and business intelligence.

Experience

Bave Holdings LLC 

AI & Automation Engineer

Riyadh, KSA

Oct 2025 – Present

- Contributed to **YourFrontDeskAI**, a 24/7 AI voice assistant for clinics and hospitals, supporting appointment booking, rescheduling, and patient interactions.
- Assisted in designing and implementing **hands-free voice intelligence workflows** integrating **n8n + Twilio + Retell AI**, converting customer interactions into actionable insights.
- Supported the development of **custom CRM integrations** to streamline business operations and improve data-driven decision-making.
- Participated in implementing scalable AI solutions with **NLP, automation pipelines, and multi-agent systems** to enhance operational efficiency.

Tech: Python · FastAPI · n8n · Twilio · Retell AI · RESTful APIs · NLP · Multi-Agent Systems · Database Design · Web Development · CRM Integration · Automation Pipelines

Verso 

Cheyenne, US

Data Scientist

Nov 2024 – Oct. 2025

- Designed and implemented the **Clarya Email Verification System** using **FastAPI**, implementing RESTful APIs for email validation, lead scoring, and deliverability optimization.
- Build scalable backend services integrating third-party APIs for real-time data scraping.
- Implement chatbot functionality with **NLP pipelines** for automated conversation handling.
- Optimize database schemas and ETL pipelines for high-volume survey data processing.
- Automate data transformation and statistical analysis pipelines to enhance efficiency.

Tech: FastAPI · Python · RESTful APIs · Database Design · WEBAPI · Web Development · Product Development

Techlign

Islamabad, Pakistan

Full Stack Engineer

June 2024-Oct. 2024

- Contributed to building robust .NET-based applications with integrated **AI modules**.
- Developed secure RESTful APIs with **JWT authentication** and role-based authorization.
- Designed optimized database schemas using **Entity Framework Core**, improving query performance by 25%.
- Implemented server-side business logic and data processing workflows.
- Enhanced frontend functionality and UX using **React.js**.

Tech: React.js · Python · ASP.NET · WEBAPI · Web Development. RESTful Architecture. Entity Framework

Omdena

Jr. Machine Learning Engineer

Silicon Valley, California, US

Jan 2023–June 2024

- Developed **Computer Vision models** using OpenCV and TensorFlow for mango leaf disease detection, achieving 92% accuracy.
- Conducted **urban data analysis** of Los Angeles open datasets for planning insights.
- Predicted student academic success using Python and **scikit-learn**.
- Built an **NLP toolkit** for processing Nepali language data.

Tech: Anomaly Detection · Credit Risk Analysis · Machine Learning · Data Preprocessing · Data Modeling · Feature Engineering · Data Cleaning · Data Visualization

OGDCL

Islamabad, Pakistan

Project

Jul 2023 – Sep 2023

- Developed a customized chatbot to optimize communication and support services, earning a **letter of appreciation**.
- Gained hands-on experience with **OSPF and VLAN configuration**, strengthening networking fundamentals.

Technical Skills

Backend Development:

Python, C#, PHP | FastAPI, Django, ASP.NET Core, Laravel, Twilio API | RESTful APIs | MySQL, PostgreSQL, Entity Framework | Microservices, ETL, Database Design.

Machine Learning & AI:

scikit-learn, TensorFlow, OpenCV, Transformers | NLP (DialogPT) | Data Preprocessing | Feature Engineering | Credit Risk Analysis.

Data Analytics & Engineering: Power BI, Advanced Excel, SQL | Data Cleaning, Visualization, ETL Pipelines.

Frontend: React.js, HTML, CSS, JavaScript | Responsive Web Design.

Tools & Cloud: AWS, n8n, Git/GitHub, Networking (OSPF, VLANs)

Certifications

- Google Certified Data Analyst.
- Microsoft Power BI Data Analyst (Professional).
- Google Business Intelligence Certificate.
- AWS: Getting Started with Data Analytics
- DataCamp: Data Analysis in Excel | Data Analyst Associate
- **Letter of Recommendation** – Omdena

PROJECTS

- **Credit Risk Analysis:** Python | GitHub: <https://github.com/Technocolabs100/Financial-risk-modelling-of-leading-European-P2P-lending-platform-Bondora.git>
- **Chatbot using DialogPT – NLP model implementation using Transformers.**
- **Employee Management System** – Django-based CRUD web app.
- **Food Delivery Website** – Laravel + PHP + MySQL with payment integration.
- **Mango Leaf Disease Detection, Student Success Prediction, LA Urban Data Analysis, Nepali NLP Toolkit** (Omdena Projects)
- **Business Nexus (Final Year Project)** – Django platform for entrepreneurs and investors.
- **Power BI Repository** – Centralized dashboard and report management system | GitHub: <https://github.com/ABDULRAFAY757/Power-BI>

References

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