

# Muhammad Zaheer

Data Scientist

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## I Summary

As a self-taught Data Scientist and Machine Learning Engineer, I bring a unique blend of tenacity, adaptability, and technical expertise to the field. My journey has been marked by a relentless pursuit of knowledge, hands-on experience, and a passion for leveraging data to drive business solutions. With proficiency in key programming languages, advanced statistical modeling, and a proven track record of delivering impactful results, I am poised to make a significant contribution to data-driven endeavors. My self-driven approach reflects a commitment to continuous learning, innovation, and a deep-seated enthusiasm for the evolving landscape of data science and machine learning.

## 2 Experience

### 2.1 Machine Learning Engineer

*Oct 2024 – Present*

AirLoop, Islamabad, Pakistan • Full-time • On-site

- Led development of web applications and end-to-end machine learning systems with integrated DevOps automation and CI/CD pipelines.
- Increased model accuracy from 40% to 91% using feature engineering, hyperparameter tuning, ensemble methods, cross-validation, and data augmentation.
- Deployed production-grade ML models in collaboration with civil engineering and intelligent transportation systems (ITS) teams.
- Automated the complete Pavement Condition Index (PCI) calculation workflow using AI and Python, eliminating manual steps.
- Worked closely with civil engineers and ITS professionals to embed AI into infrastructure and transport solutions.
- Communicated technical results and processes to non-technical stakeholders, bridging the gap between engineering and operations.

### 2.2 Data Scientist

*Jun 2024 – Sep 2024*

Plug AI

- Worked in R&D, focusing on experimenting with new AI ideas in fintech, healthcare, and large language models (LLMs).
- Built AI models to solve healthcare problems, improving accuracy in predictions and diagnoses.
- Explored machine learning applications in fintech, leading to more efficient processes.
- Collaborated with teams to develop practical AI solutions using natural language processing and computer vision.
- Continuously tested and applied new AI methods to create real-world impact across different sectors.

### 2.3 Software Engineering Trainee

*Oct 2022 – May 2024*

Ejad Labs

- Engineered a fully functional web application to optimize operational workflows and enhance user interaction.
- Devised a resume scoring system based on intricate criteria, resulting in a 30% reduction in manual screening efforts.
- Constructed an automated AI interviewer using advanced machine learning techniques (GAN, computer vision), accelerating decision-making processes by 40%.
- Innovated a real-time GAN-based visual interviewer, improving interview efficiency by 25%.
- Integrated solutions into a comprehensive HR project, incorporating NLP, deep learning, web development, GAN, and computer vision.
- Achieved substantial cost savings and a remarkable 70% reduction in candidate selection and onboarding timelines.

### 2.4 Python Developer & Red Teamer

*Jul 2023 – Aug 2023*

Government of Pakistan

- Decreased web application penetration testing time from 20 to 10 hours, resulting in direct labor cost savings and heightened security effectiveness.
- Reduced data extraction and conversion time by 70%, delivering concrete time savings for machine learning projects and mitigating resource-intensive manual tasks.
- Realized a 30% cut in pentesting expenditures by adopting Python automation for routine testing, providing a direct impact on the budget allocation for security initiatives.
- Improved team efficiency by 20% through seamless collaboration, ensuring the smooth integration of automated solutions across diverse functional teams without disruptions.
- Instituted new tools and methodologies, resulting in a 15% boost in overall process efficiency.

### 3 Certificates

**Problem Solving**  
HackerRank

*Sep 2024 – Present*

### 4 Skills

- **Programming Languages:** Python, C/C++
- **Machine Learning & AI:** Deep Learning, Neural Networks, Natural Language Processing, Computer Vision, Generative AI, Reinforcement Learning, Large Language Models, Time Series, Data Modeling & Evaluation
- **Frameworks & Libraries:** TensorFlow, PyTorch, Scikit-learn, FastAI, Keras, Flask, Django, FastAPI, Streamlit
- **Databases:** MySQL, PostgreSQL, MongoDB
- **DevOps & Tools:** AWS, Docker, Kubernetes, Git, Linux Administration, Nginx
- **Data Analysis:** Tableau, Exploratory Data Analysis
- **Other:** RESTful APIs, Data Structures, Algorithms, Applied Mathematics, Chatbot Development, Transfer Learning, Agentic AI