RABIA REHMAN

0318-7883986 | github.com/Rabia123Rehman   rabiarehman.0123@gmail.com | linkedin.com/in/rabia-rehman-274018250/

FJWU
Bachelor of Science, Software Engineering   *2021– 2025*
Electives: Web Management, Machine Learning, Artificial Neural Network, Deep Learning, NLP

EXPERIENCE

- **Associate AI Researcher at Rev9 Solutions**   *August 2025 – Present*
  Contributing to advanced research in medical AI, with a focus on developing deep learning models for skin cancer detection and classification. Experienced in computer vision, model training, and optimization, with a strong commitment to applying AI for impactful healthcare solutions.

- **Center for Advanced Research and Technology (CARE) Pvt ltd**   *April 2025 – July 2025*
  Done Healthcare Insurance Project in which the frontend is made using HTML, CSS, Tailwind, Bootstrap, and JavaScript. Made a Chabot of it using Gemini API.
  Trained Artificial Intelligence (AI) using Deep learning Techniques like CNN, RNN, Anomaly Transformer, and GAN, etc.
  Need Base plan generation for Healthcare Insurance using Premium Amount Prediction.
  Integrate Frontend with Backend Using Flask API.
  Worked on the Maintenance Project for Cranes using Deep learning techniques.

- **Hypertech UK Ltd.**   *Remote | January 2023- October 2024*
  Worked on various AI and web development projects for international clients. Built and trained machine learning models using Python, and developed responsive websites using HTML, CSS, JavaScript, and PHP. Managed both frontend and backend tasks, and consistently delivered high-quality work that met client needs and deadlines.

- **Full stack web development | NICAT (Electric Eye)**   *Onsite | June 2024- July2024*

  Designed and developed a website for Electric Eye. Worked on the frontend using HTML, CSS, and JavaScript, and built the backend using PHP. Focused on creating a clean layout and connecting forms to the backend.

- **Web Developer | Prodigy InfoTech**   *Remote | Dec 2023 – Jan 2024*

- **Web Developer | Grow Intern**   *Remote | Dec 2023 – Jan 2024*

- **C++ | AICP**   *Remote, Lahore | Nov 2023 – Jan 2024*

  Developed online computer shop selling system, electric mountain railway record system, Units of electricity Consumption, and calculator that calculates areas, perimeter, and sum of angles of hexagon and square. Tic-Tac-Toe, contents and weights of sacks checking system, calculator that calculates daily profit from hiring 10 rowing boats from the river, recorder that records donations to charity.

- **Project Manager| Human Care Foundation**   Rawalpindi | *Feb 2024*
  Discipline Incharge | Human Care Foundation

- **Global Youth Ambassador | Opportunities Circles**
  Selected as a global ambassador among 20 countries.

RESEARCH PAPER PUBLICATION

- **Title:** "AI-Driven Framework for Need-Based Insurance Plan Generation and Anomaly Detection using Deep Learning Techniques"
- **Published In:** IEEE Journal (2025)

SKILLS

- **Programming Languages**: Python, C/C++, Java, C#, PHP, JavaScript, MATLAB
- **Machine Learning & AI**: Supervised Learning, Unsupervised Learning, Reinforcement Learning, Classification, Regression, Clustering, Neural Networks (ANN), Deep Learning (CNN, RNN, LSTM,GAN) Model Optimization, Hyperparameter Tuning
- **Machine Learning Libraries/Frameworks**: TensorFlow, Keras, PyTorch, Scikit-learn, XGBoost, Pandas, NumPy, Matplotlib, Seaborn
- **Data Processing & Analysis**: Data Cleaning, Feature Engineering, Dimensionality Reduction, Exploratory Data Analysis (EDA), Statistical Analysis, Data Visualization

- **Web Development**:
  - **Frontend**: HTML5, CSS3, Tailwind, JavaScript (ES6), React, Bootstrap (Basic)
  - **Backend**: PHP, Flask, Django, FastAPI
  - **Database Management**: MySQL, PostgreSQL, SQL Server, MongoDB
- **API Development & Integration**: RESTful APIs, FastAPI, API deployment in cloud environments
- **Version Control & Deployment**: Git, GitHub, Docker, AWS, Apache, Linux (Ubuntu)
- **Tools & Technologies**: Jupyter Notebook, Google Colab, IntelliJ, Visual Studio, XAMPP, Figma, Adobe Illustrator, Mockups, Cisco Packet Tracer

PROJECTS

Final Year Project (AI-Based HealthCare Insurance System)
- Addressed the flaw in traditional healthcare insurance systems where coverage is based on employee designation rather than individual healthcare needs.
- Designed and implemented a deep learning-based system to automate healthcare insurance premium prediction, plan classification, and anomaly detection.
- Trained an **RNN model** to predict next visit details, including: premium amount**,** category**,** age**,** gender**,** marital status**,** doctor ID, and service ID**,** based on sequences of past visits.
- Achieved a **Mean Squared Error (MSE) of 11** for premium amount prediction and **90% classification accuracy** for plan category prediction.
- Developed an **Anomaly Detection Module** using both **GAN** and **Anomaly Transformer**, reaching **96% accuracy** in detecting abnormal service patterns in patient histories.
- Need Base plan generation using clustering techniques K-Mean, Fuzzy C-Mean.
- Integrated models into a full-stack web platform using **Flask (Python)** for the backend and **HTML, Tailwind CSS, JavaScript** for the frontend.
- Created a **Gemini API-based Chabot** to assist users in understanding model predictions and selecting personalized insurance plans.
- accuracy).

Other Selected Projects
- **House Price Prediction**: Linear regression was used for house price prediction.
- **Diabetes Prediction:** Built an **ANN** model to predict diabetes with **95% accuracy**.
- **Parkinson's disease Prediction**: Applied **ANN**, **SVM**, and other models for predicting Parkinson's from speech (**92% accuracy**).
- **Customer Churn Prediction**: Created a churn prediction model using **XGBoost** for improved retention.
- **Image Classification**: Designed a **CNN** with 89% accuracy for image classification.
- **Heart Disease Prediction**: Built a model using **Logistic Regression** and **Random Forest** for predicting heart disease (**85%**
- **Sentiment Analysis**: Built an **NLP** model for movie review classification.
- **Titanic Survival Prediction**: Applied **logistic regression** for survival prediction.
- **Websites**: Dental clinic (**Frontend:** HTML, CSS, JAVASCRIPT, and **Backend:** PHP, MYSQL), Portfolio website, Tic-Tac-Toe, weather application, E-commerce Websites.

CERTIFICATIONS & AWARDS

CERTIFICATIONS
- Front-End Web Development | Google, Microsoft, Devtown
- Learn Everything about AI | Google, Microsoft, Devtown
- Instagram Clone | Devtown
- Learn Python and Machine Learning | Google, Microsoft, Devtown
- Three Certificates of Appreciation | Devtown

AWARDS
- Receive an award by organizing a Seminar at the University on the topic of "How to raise funding for FYP"?
- Secured **1st Runner up** in Final Year Project Defense "**Design and Implementation for Need-Based Insurance Plan Generation and Anomaly Detection using Deep Learning Techniques".**