



## Abdul Rahim Kolachi

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### ABOUT ME

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I am a machine learning Engineer with over 4 years of experience in creating products and applying machine learning technologies. I have worked on a wide range of projects, ranging from natural language processing to computer vision and recommendation systems. I have developed complex machine learning models and algorithms, created data pipelines, and optimized machine learning models for both accuracy and speed. I have experience with various machine learning frameworks such as Transformers, TensorFlow, Keras Scikit-learn, LangChain and Pytorch. I am passionate about using machine learning to solve real-world problems and have a strong focus on model accuracy, scalability, and reliability.

### WORK EXPERIENCE

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#### Machine Learning Engineer

*LangoPal ( United State Of America )(Remote job)*

- Developed an AI- based system for Direct language translation of Video.
- Integrated AWS transcribe and Polly for extracting accurate text from audio and creating new realistic audio with new language.
- Applying Deep fake technology to match the movements of lips and facial expression.
- Developed API using Fast Api to integrate with Front End side.

#### AI & Robotics Lead

*NAVTTTC ( Software Department at University of Sindh, Jamshoro, Pakistan)*

- Developed Text to image, image to text, image to image, image to video Generation and develop prototype web app using Gradio for students.
- Developed image classification projects using ANN, CNN , yolo and other models with integration of fast API
- Developed conversion chat bots for answering real time answers with the help of Lang Chain
- Develop LLM models using Hugging Face

#### Research Assistant

*Electronics Department( Mehran University of Engineering and Technology, Jamshoro, pakistan)*

- Developed POCT device which can detect early disease in cotton crop using deep learning and jetson nano
- Developed power management system which can supply power continuously to device, power backup is 12 hours
- Integrated IOT based system so user can monitor device and crop 24/7 using internet in mobile.
- Developed an Application for controlling and monitoring the device

## EDUCATION AND TRAINING

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### Bachelor in Electronics Engineering

*Mehran University of Engineering and Technology SZAB campus [ 04/01/2016 - 18/12/2019 ]*

**Address:** Mehran University of Engineering and Technology SZAB campus Khairpur Mirs, Sindh, Pakistan Mehran University of Engineering and Technology SZAB campus Khairpur Mirs, Sindh, Pakistan, 66020 Khairpur Mirs (Pakistan)

<https://www.muethkp.edu.pk/>

- **Azure AI fundamental**
- **Getting Started with AI using IBM Watson**
- **IBM Data Science Professional Certificate**
- **Neural Networks and Deep Learnings**

## DIGITAL SKILLS

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Microsoft Office / Wordpress, SEO, Analytics / APP INVERTOR / experience of working on Fiverr, Freelancer and Upwork in Freelance market

### Programming

- Implementing machine learning algorithms and utilizing libraries such as TensorFlow, Keras, PyTorch, and scikit-learn.
- Working with popular deep learning architectures such as CNNs, RNNs, LSTMs, and GANs.
- Proficient in data structures, algorithms, and software design principles, as well as optimization techniques such as gradient descent, backpropagation, and regularization.
- Experienced in using version control systems such as Git and Linux environments, as well as distributed computing and parallel processing frameworks like Hadoop and Spark, and cloud computing platforms such as Azure.
- Strong understanding of natural language processing (NLP) and computer vision tasks and have experience with popular libraries such as OpenCV, NLTK, and SpaCy.
- Familiarity with reinforcement learning libraries like OpenAI Gym and Stable Baselines and experience with optimization algorithms such as Adam, Adagrad, RMSprop.
- Large language models, hugging Face

### Hardware

- Designing and developing hardware systems, including circuit boards, microcontrollers, and other electronic components.
- Programming and configuring microcontrollers and microprocessors like Jetson nano, Raspberry Pi 4, Arduino, and other controllers to ensure proper functionality.
- Testing and debugging hardware systems, using tools like oscilloscopes, logic analyzers, and other test equipment.
- Researching and staying up-to-date on the latest technology and industry developments, including new microcontroller and microprocessor products.
- Identifying and troubleshooting hardware-related issues and implementing solutions to resolve them.