

# Faraz Ahmad

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## SUMMARY:

As a computer vision specialist, I have a strong interest and curiosity in this evolving field. I have comprehensive experience in developing and deploying computer vision solutions using the latest technologies. I have a quick and agile learning approach and a high level of performance.

## PROFESSIONAL EXPERIENCE:

### Computer Vision Engineer

Mech Solutions - remote, Pakistan

Mar '23 - Ongoing

Role: **(i)** Collaborated with a team of engineers to optimize and enhance the design of 3D printers, focusing on improving efficiency, reliability, and print quality. **(ii)** Utilized computer vision techniques to develop a spaghetti detection system, which involved analyzing captured images to identify and prevent filament-related print failures. **(iii)** Provided assistance in the product launch of BTT Pi empowered by Cloud3dPrint, an innovative solution that enabled remote monitoring and control of 3D printers through cloud connectivity. **(iv)** Managed the company's social media platforms, including content creation, scheduling posts, and engaging with the online community to enhance brand visibility and drive customer engagement.

### Computer vision Intern

GIK Institute - Topi, Pakistan

Jun '21 - Jul '21

Role: **(i)** Learned about deep learning, convolutional neural network, image processing, computer vision, and feature detection. **(ii)** Developed a model to Perform detection of Medial Cubital Vein using TensorFlow Object detection and YOLOv5. **(iii)** Successfully developed an object detection model from scratch, reducing training time from 2 days to 30 minutes while maintaining 97% accuracy in Python.

### Business Development Trainee

SWVL - Islamabad, Pakistan

Sep '22 - Dec '22

Role: **(i)** Assisted senior sales representatives in managing client accounts, generating leads, and maintaining customer relationships. **(ii)** Organized meetings and appointments with regional companies to promote SWVL Taas services through cold calling and emailing. **(iii)** Understood and built customized models for 10+ organizations to fulfill their transportation needs.

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## EDUCATIONAL BACKGROUND:

2018 - 2022

### BACHELOR OF SCIENCE IN ENGINEERING

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI), Pakistan

CGPA: 3.51/4.00

Major Subjects: AI, Advance Calculus, Linear Algebra, Differential Equations, Numerical Analysis, probability and Statistics, Robotics, System Dynamics and Control, Operations Management, Project Management, C++

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## FINAL YEAR PROJECT:

2021 – 2022

**Title:** *Path Planning of Holonomic Collaborative Robot using Machine Learning.*

**Description:** This project aimed to develop a path-planning and obstacle-avoidance algorithm for a holonomic collaborative mobile robot. The algorithm utilized deep reinforcement learning and Simultaneous Localization and Mapping (SLAM) to enhance its performance. The initial model creation and testing were performed in MATLAB/Simulink, while training was conducted using Python. The algorithm was validated through simulation using Gazebo, Ubuntu, and ROS Noetic before being implemented on a physical robot. The testing and validation process was completed in a manufacturing lab at GIKI.

## **INTERESTS & ADDITIONAL SKILLS:**

### **SKILLS**

- Programming Languages: Python, MATLAB programming, C++, SQL,R
- Engineering Software: MATLAB, ANSYS, SolidWorks, CREO, EES, Proteus, Fusion360

### **INTERESTS & HOBBIES**

Programming, Machine Learning, Data Science, Farming, Chess and playing cricket.

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## **CERTIFICATIONS:**

### **MATLAB:**

Completed Introduction to Programming with MATLAB by Vanderbilt university via Coursera.

### **Python:**

Completed 7-week Sololearn Python course.

### **Machine Learning:**

Completed Machine Learning by Stanford university via Coursera in MATLAB.

Completed Machine learning specialization by DeepLearning.ai via Coursera in Python

### **Deep Learning and Computer Vision:**

Completed Deep learning specialization by DeepLearning.ai via Coursera.

Completed Computer Vision Nanodegree by Udacity.

### **Data Analytics :**

Completed 6-month Google Data Analytics Specialization via Coursera.

Completed Exploratory Data Analysis with MATLAB by MathWorks via Coursera.

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## **AWARDS & ACHIEVEMENTS:**

- Graduated with Distinction from GIKI.
- Four times Dean's Honor Roll Recipient.
- Awarded Chief Minister KPK scholarship for bachelor's study at GIKI.
- Awarded Talent Scholarship by The Quaid-e-Azam College, Swabi.
- Director Mechanical of Robotics Team
- Ranked among the Top 10 in the Batch