MAHMOOD YOUSAF

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SUMMARY

I am very interested in machine learning, deep learning and data analysis. I am looking for opportunities to maximize my potential and contribute to the growth of an organization. I really enjoy learning advanced technologies to keep my skills up to date. I like to solve real world problems by using my skills. I have a great deal of flexibility in working in any kind of environment.

PROFESSIONAL EXPERIENCE

Computer Vision and IoT Intern Oct 2021 - Nov 2021
The Sparks Foundation *Icube Building, Singapore*

- I developed face-mask detection using deep learning
- I developed a website for deployment of face-mask detection system
- Demo and source code is available on Github
- Letter of recommendation Link

TECHNICAL PROJECTS

Soil analysis using machine learning (Final year project)
In this project, by using RGB images soil different parameters are predicted. In the literature review, different techniques are used for feature extraction from RGB images. Different machine learning algorithms are used for prediction like support vector regression, decision tree regression, random forest regression, artificial neural networks, and convolutional neural networks.

- Source code and report: Link

Facemask detection using deep learning and deployment on website
In this project, convolutional neural network is trained on two classes facemask and without facemask. After training, CNN model is deployed on a website. From the website, user can select image from local storage and model will respond whether there is a mask on face or not.

- Source code and demo: Link

Face id door lock using deep learning
In this group project, we collected a dataset using a webcam by OpenCV. Convolutional neural network (CNN) is trained on the dataset. Neural network architecture is created from scratch and experimented with different neural network architectures. It was a computer vision course project so the computer vision part is successfully implemented but due to time limitations, we were unable to connect with the micro-controller for a door lock.

- Source code and report: Link

Pepper health checker using deep learning
In this group project CNN model is trained on dataset to predict by image to check that pepper is healthy or not. In the report there is performance analysis of different architectures used for prediction. Different CNN architectures used for prediction

- AlexNet architecture
- LeNet architecture
- Our own CNN architecture
- Source code and report: Link

Fruit Sabzi Mandi Android Applicatoin
In the project, I try to solve the real world problem like farmer want to sell their crops. Farmers are totally blank and they have no idea about the market rates. So this mobile application will help farmer, buyer and commission shops. Functionalities: 1)User can Login. 2)User can Signup. 3)User can manage daily deals. 4)User can add daily deals. 5)User can delete delete daily deals. 6)User can view deals. 7)User can change Language into Urdu

- Source code and demo: Link

Learning Management System
In this group project, learning management system is developed using MYSQL , Bootstrap 4 , CSS , PHP and HTML. Three modules are developed Admin, Teacher and Student which is fully connected with MYSQL database.

- Source code and report: Link

IoT Projects
In this group project, seven projects are build with following titles.1) Collision Detection Avoidance 2) Flame Sensing Robo car 3) Gesture Control Bluetooth 4) RFID Attendance 5) Smart Home 6) RFID Door Lock 7) Laser Based Security System

- Source code and report: Link

TECHNICAL SKILLS

- **Programming languages**
  Python, C++, JAVA, C
- **Machine learning, Deep learning libraries**
  Numpy, Pandas, Tensorflow, Keras, Skit-learn, Matplotlib, OpenCV, , AWS Sagemaker, S3 buckets
- **Operating systems**
  Linux (Mint, Ubuntu), Windows
- **Mobile application development**
  Android native development using java, firebase
- **Web development**
  HTML, CSS, JavaScript, PHP, Bootstrap, MySQL
- **Tools**
  Android studio, Visual studio code, Wireshark, Maltego, VMware, Github, Latex, XAMPP

ACHIEVEMENTS

- **Merit based scholarship**
  I received hundred percent scholarship on Bachelor degree in Computer Science at Namal University Mianwali
- **Presidential Initiative for Artificial Intelligence and Computing admission**
  My selection for Artificial Intelligence course was great achievement for me.From there, I learned Artificial Intelligence basic concepts, deep learning hands on and aws sagemaker for deployment of AI models for end-to-end solution.I successfully passed all quarters.

WORK EXPERIENCE

- **Instructor**
  I joined Namal society for social impact as an instructor in the education wing. The main aim of this society was to help poor children's free education.I served there almost 4 years to impart my knowledge.
- **Co-Head of education wing**
  I was promoted as Co-Head of education wing at Namal society for social impact. I served 1 year as Co-Head. I learned there how to manage teachers and students.
- **Head of education wing**
  I was promoted as Head of education wing at Namal society for social impact. I served 1 year as Head of education wing. As Head of education wing, I managed more than 50 teachers and 150 students in the education wing.
- **Vice-President Namal society for social impact**
  I was promoted as Vice-President at Namal society for social impact. I served 1 year as Vice President of Namal society for social impact. As Vice-President, I managed education wing and skill development wing(which is working for development of skills in the local students). I learned leadership skills here to manage the society.

EDUCATION

Bachelor of Computer Science, Namal University Mianwali 2018-2022
CGPA: 3.45 / 4

Intermediate in Pre-Engineering, Govt Degree College Chowk Azam, District Layyah 2016-2018
Marks: 974 / 1100

Matriculation in Science, Govt Muslim High School Chowk Azam, District Layyah 2016-2018
Marks: 975 / 1100

OTHERS

- **Languages skills: English, Urdu, Pastho, Punjabi, Sariki**