Abdullah Ikram Ullah Tabassam

Artificial Intelligence Expert | Electrical Engineer

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PROFILE

I am a highly motivated individual with a strong academic background in Artificial Intelligence. Pursuing an MSc in AI from a renowned university in Liverpool, I have developed a solid understanding of machine learning algorithms, natural language processing, computer vision, and other related fields. I possess excellent problem-solving skills and a keen eye for detail, which enable me to analyze complex data sets and provide innovative solutions. Through my coursework and personal projects, I have gained practical experience in AI, demonstrating my ability to work independently and think creatively. I am now eager to apply my knowledge and skills in a professional setting and make a meaningful contribution to an organization's AI initiatives.

EDUCATION

Sep 2022 – Aug 2023 (present)

Masters in Artificial Intelligence (Machine Learning)

Liverpool John Moores University, Liverpool, England.

Courses

- Foundations of Machine Learning (*Distinction*)
- Deep Learning Concepts & techniques (*Distinction*)
- Accelerated Machine Learning
- Advanced Topis in Deep Learning
- Enterprise Machine Learning
- Research Methods (*Distinction*)

Project and Thesis: In-flight Bird Detection, Bird Counting, Migratory Path, and Behaviour analysis

2017 – 2021

Bachelors in Electrical Engineering

Institute of Space Technology, Islamabad, Pakistan.

CGPA 3.13/4.00

Project and Thesis: IoT Based System for Remote Health Monitoring

2015 – 2017

FSc. Pre-Engineering

Zamindar Post Graduate College, Gujrat, Pakistan.

Marks 947/1100

2013 – 2015

Matriculation

Dar -e-Arqam Model High School, Gujrat, Pakistan.

Marks 982/1100

EMPLOYMENT HISTORY

Feb 2022 – Jun 2022

Electronics Engineer, Service Care – Part of Clipper Logistics. Oldham

Achievements/Tasks

- As an Electronics Engineer in the SDA department, I specialize in fault finding, testing, and repairing appliances from various reputable companies such as Amazon, Shark, Hoover, Tefal, and Panasonic.

Jul 2021 – Sep 2021

Virtual Assistant, AMZIA Ltd. Bolton

Achievements/Tasks

- Product Hunting, Data Management for the company, and Preparing Reports using MS word and MS Excel.

Jan 2021 – Feb 2021

Engineering Intern, General Fan Company (GFC) Ltd. Gujrat

Achievements/Tasks

- As an intern in the Electrical Department, my responsibilities included sourcing and maintaining records of various electronic items used within the organization.

Jul 2019 – Aug 2019 **Engineering Intern,** National Institute of Electronics Islamabad

Achievements/Tasks

- In the Communication Engineering/IoT Lab, gained experience designing various types of antennas with CST Studio Suite software and learned the basics of PCB fabrication.

SKILLS

Computer Vision | NLP | Deep Learning | Machine Learning | Docker | MLOps | Hadoop | Spark | NumPy | Pandas | Python | C/C++ | CuDF | CuML | Micro-Controllers | Arduino | ESP-32 | MATLAB | Electronic Testing and Repairing | MS Office | Management | Problem Solving | Teamwork

PERSONAL PROJECTS

Annual Project (*Present*): In-flight Bird Detection, Bird Counting, Migratory Path, and Behaviour analysis

End-to-End Object Detection Web-Application

- Designed a python flask web application with multiple interactive webpages including login/register pages, to detect objects using computer vision.
- Integrated TF2 Serving for fast and efficient serving of the model.
- Integrated a MYSQL database to store the user details and keep a record of the detections made.
- Containerised the app to make it scalable using Docker.
- Being on a strict deadline, completed the task before time with efficiency.

Custom Object Detection

- Cleaned a raw image dataset and labeled all the images using bounding boxes.
- Performed necessary pre-processing and augmentation of the dataset.
- Trained the model using transfer learning on TF2 pretrained models with TensorFlow Object Detection API, resulting in a mean average precision of 91% and an average recall of 80%.

Audio Signal Analysis to detect Anti-Social and Criminal Behaviour

- Extracted various features like Mel-spectrograms, and Mel Frequency Cepstral Coefficients and its derivatives from Audio signals to create a dataset.
- Performed PCA to reduce dimensionality and training time.
- Created custom Neural Networks and trained them on the created dataset.
- Performed Hyper-parameter optimization to achieve an accuracy of 92%., sensitivity of 91% and specificity of 99%. The loss observed was only 1.7% with an average AUC score of 99%.

Skeletal Analysis for Identification of Birds from bones

- Cleaning, and pre-processing the skeletal measures of birds to design a model to classify various birds' species from their bone measurements.

Particle classification using LHC dataset

- Performed Exploratory data analysis to observe the hidden features in Large Hadron Collider dataset, to choose the best features.
- Used various techniques like chi-2 and PCA to reduce dimensions.
- Designed a deep neural network for separating/classifying signal and background processes efficiently.

Final Year Project (BSc. EE): IoT Based Remote Health Monitoring System

- Collection of vital readings (Temperature, Blood Pressure, Pulse Rate and Oxygen Saturation Level) from patients.
- Send the readings to the internet cloud. Display the readings on the GP's web portal. Generate a report for the patient.

Home Automation using ESP-32

- Control almost all your home devices using your smartphone.

Development of a Temperature Controlled Fan with an Alarm system

- Turn the cooling system ON in case temperature goes beyond a temperature limit.
- Trigger the alarm system in case of emergency.

Signal Analysis using MATLAB GUIDE

- Creation of a MATLAB GUI to analyze digital signals.

Design and Development of Line Following Robot

- Development of a line following robot using IR sensors

Transmission of Audio Signals through Li-Fi

- At receiver end Solar panel converted the light signals into electric signals.
- Designed basic electronic circuits for audio amplification and used LEDs for converting these audio signals into light.

CERTIFICATES

Certificate of course completion – IBM Data Analysis with Python.

Certificate of course completion – IBM Data Science Methodology

Certificate of course completion – IBM Databases and SQL for Data Science with Python

Certificate of course completion – IBM Machine Learning with Python

Certificate of course completion – IBM Python for Data Science, AI & Development

Certificate of course completion – IBM What is Data Science

Certificate of working in ALTIUM Designer Workshop from Institute of Space Technology. (2018)

Certificate of Acknowledgement from Institute of Space Technology in Marketing of IST youth Carnival. (2018)

Certificate of Acknowledgement from Institute of Space Technology for event organizing and marketing at World Space Week. (2019)

Certificate of Appreciation from National Institute of Electronics Ministry of Science and Technology, Government of Pakistan. (2019)

Certificate of Acknowledgement from IST for organizing registration in TEDx Institute of Space Technology. (2019)

Certificate of Appreciation from General Fan Company (GFC) Limited. (2021)

LANGUAGES

ENGLISH
Full Professional Proficiency

Urdu
Native or Bilingual Proficiency

PUNJABI
Native or Bilingual Proficiency

Spanish
Elementary Proficiency

INTRESTS

Sports | Socializing | Music | Photography | Sketching | Gaming | Crossword Puzzles