VAISHNAV AK

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OBJECTIVE

Highly motivated Engineer with strong skills in AI, Machine Learning, and Signal/Image Processing. Proven experience in hospital-based biomedical equipment handling and real-world AI project development. Certified in Python, Data Science, and AI with hands-on experience in building deep learning models for healthcare applications. Eager to contribute to healthcare innovation through data-driven and tech-based solutions.

EDUCATION

AI EXPERT, Professional Training,   July 2024 – Oct 2024
DataMites, ID: 28250328756528

CERTIFIED DATA SCIENTIST, Professional Training,   Sept 2023 – Feb 2024
DataMites, ID: 65240620506620

BTech in Applied Electronics and Instrumentation,   July 2019 – June 2024
GOVERNMENT ENGINEERING COLLEGE KOZHIKODE ,CGPA - 6.88

BIO-MATHS, Higher Secondary Education,   July 2017 – Mar 2019
G.H.S.S Vazhakkad ,Percentage:91%

THSLC, High School ,   June 2014 – Mar 2017
T.H.S.S Vazhakkad ,Percentage:100%

EXPERIENCE

Biomedical Engineer Trainee   Nov 2024 - May 2025
ASTER MOTHER HOSPITAL   *Malappuram, India*

- Assisted in installation, calibration, preventive and corrective maintenance of medical devices in a NABH-accredited multi-specialty hospital.
- Gained hands-on experience in biomedical equipment troubleshooting, safety testing, and compliance with hospital quality standards.

Data Science Consultant Intern   Oct 2023 – June 2024
RUBIXE   *Bangalore, India*

- Contributed to AI-driven PoC projects solving real-world business problems using Python, Pandas, and Scikit-learn.
- Developed machine learning models for client use-cases, improving prediction accuracy by 90%.
- Led data preprocessing and feature engineering efforts, enhancing model performance and training efficiency.
- Translated theoretical ML algorithms into deployable, data-driven solutions in retail and healthcare domains.
- Collaborating with project teams to ensure impactful delivery of Al-based solutions.

SKILLS

Biomedical Engineering : *Medical Image Processing, Maintenance, Calibration, Troubleshooting,*
AI/ML , Data Science : *Transfer Learning, Deep Learning, Supervised & Unsupervised Learning*
Soft Skills : *Analytical skills, Strategic Problem-Solving, Collaboration,Adaptability & Fast Learning*
Programming Tools : *Python, MATLAB, MySQL, TensorFlow, Scikit-learn, Tableau, PowerBI*
Languages: *English (Fluent), Malayalam (Native), Tamil (Basic), Hindi (Basic)*

CERTIFICATIONS

CERTIFIED DATA SCIENTIST , IABAC (ID: IAB1120176000)   June 2025 - June 2028

- Certified in core data science principles including data preprocessing, exploratory data analysis (EDA), statistical methods, and machine learning fundamentals. Demonstrated practical understanding of data workflows and analytical thinking using Python and related tools.

AI EXPERT , IABAC (ID: IAB1120175905)   May 2025

- Mastered AI pipeline: data handling, training ML/DL models, evaluation, optimization, and deployment using Python and libraries like TensorFlow & Scikit-learn.

DATA SCIENCE FOUNDATION ,IABAC (ID: IAB1120174667)   Oct 2024

- Demonstrated proficiency in exploratory data analysis, data preprocessing, statistical thinking, and machine learning fundamentals

MACHINE LEARNING ,COURSERA (ID: WPDSNFXCRTWR)   Nov 2023

- Foundational ML course covering supervised/unsupervised learning, regression, SVM, clustering, and optimization

PYTHON FOR EVERYBODY ,COUSERA (ID: M22GSCX3TWAU)   Nov 2020

- Learned Python programming basics, data structures, and functions with real-world coding practice.

MATLAB WORKSHOP ,GEC Kozhikode & E-CELL IIT Bombay   Jan 2021

- Hands-on workshop on MATLAB basics, programming, simulation, and engineering problem-solving.

PROJECTS

Diabetic Retinopathy Detection. Transfer Learning — CNN — TensorFlow
Built a deep learning model using VGG16, ResNet50, and InceptionV3 for retinal image classification. Applied data augmentation, regularization , and hyperparameter tuning to improve accuracy and reduce overfitting.

Pneumonia Detection. Transfer Learning — Medical Imaging — Deep Learning
Developed a CNN-based diagnostic tool using pre-trained models (VGG16, MobileNet, DenseNet) to classify pneumonia from X-ray images. Performed model comparison, fine-tuning, and real-time deployment preparation

Cat vs. Dog Image Classification. CNN — Image Classification — TensorFlow
Designed and trained a CNN model using TensorFlow/Keras for binary image classification. Executed data preprocessing, augmentation, and model evaluation for deployment-ready pipeline.

Face Detection and Gender Prediction. CNN — Computer Vision — Pretrained Models
Built a CNN model to detect faces and predict gender using MobileNet, InceptionV3, and DenseNet. Focused on model optimization and comparison to enhance classification performance.

FIFA20— Clustering — Unsupervised Learning — K-Means — Hierarchical Clustering
Performed clustering on FIFA20 dataset to segment players by attributes. Achieved strong silhouette score (0.74). Applied EDA, data cleaning, and visual analysis of trends across positions and ratings.

Handwritten Digits Recognition — Deep Learning — Neural Networks — TensorFlow
Trained a multi-layer neural network on MNIST to classify handwritten digits. Used normalization, dropout, and model tuning. Achieved high accuracy using TensorFlow/Keras.

Auto Price Prediction. — Regression — EDA — Feature Engineering
Built a predictive model to estimate car prices using regression techniques. Conducted data analysis, feature selection, and model optimization for actionable insights in automotive pricing strategies.