Yahya Mateen

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Summary: Engineering graduate with expertise in machine learning, deep learning, and web development. Proficient in mathematical formulation, with a proven track record of project implementation and a keen eye for user experience.

Education

University of Engineering and Technology, Lahore Sep 2019 - Oct 2024

Bachelor of Science, Mechatronics Engineering

Relevant Coursework: Statistics, Linear Algebra, Machine Vision, Intelligent Systems, Computer Programming I & II

Courses

- Deep Learning Specialization — DeepLearning.AI
- Machine Learning Specialization — Stanford

Projects

TeeSize https://github.com/yahyavaleo/teesize

Automatic T-shirt measurement - *PyTorch, OpenCV, PyQt5*

- Developed a deep learning model to detect landmarks on T-shirt images, achieving a PCK score of 95.6%.
- Selected a U-Net with ResNet50 encoder architecture and trained the model on a subset of the DeepFashion2 dataset.
- Created a pipeline to automatically remove invalid images and perform the necessary transformation steps.
- Performed data augmentation using the ImgAug library.
- Designed algorithms to calculate the required sizes, solving challenges like unsymmetrical and misaligned landmarks.
- Implemented perspective correction and camera calibration using OpenCV.
- Built an intuitive GUI using PyQt5 to display measurements in both tabular format and visual diagram.

Kaggle Competition https://kaggle.com/code/yahyavaleo/bank-churn

Bank churn estimation - *LightGBM, Scikit-Learn*

- Developed a predictive model to estimate bank churn using customer data.
- Conducted thorough feature analysis to explore the relationship between each input feature and the target variable.
- Implemented a scikit-learn pipeline for data preprocessing, including one-hot encoding, data cleaning, and type conversion.
- Trained a LightGBM classifier, achieving roughly 86% accuracy and 0.75 AUC ROC score.

Yahya Valeo https://yahyavaleo.github.io

Personal website - *HTML, CSS, JS*

- Developed a responsive portfolio website using HTML, CSS, and JavaScript, hosted on GitHub Pages.
- Designed an aesthetically pleasing user interface based on the neobrutalism design system.

Drafted Papers

Automatic Measurement of Jeans using Computer Vision — **Supervisor:** Mr. Rzi Abbas

Technical Skills

- Programming Languages: Python, C, C++, MATLAB, HTML, CSS
- Libraries: PyTorch, Scikit-Learn, LightGBM, Pandas, NumPy, Matplotlib, Seaborn, OpenCV, ImgAug, PyQt5
- Tools: Git, Microsoft Office suite, LaTeX, Markdown
- Concepts: Data Structures and Algorithms, Convex Optimization, Hypothesis Testing, Experiment Design