MUHAMMAD SHAHIN CS

AI Developer

CONTACT ME

9656234530

shahtechiee@gmail.com

github.com/Muhammad-Shahin-CS

linkedin.com/in/muhammad-shahin-c-s

Ernakulam,Kerala

EDUCATION

Diploma in Electronics and Communication Engineering

Government Polytechnic College, Perumbavoor

2018 - 2021

SKILLS

- Python
- Computer Vision
- YOLO
- Machine Learning
- Deep Learning
- OpenCV
- Keras
- TensorFlow
- Image Processing
- OCR
- Flask
- Docker
- CI/CD Pipeline
- MediaPipe

SUMMARY

AI Developer with one year of hands-on expertise in OpenCV, PyTorch, and TensorFlow. Specialized in computer vision, proficient in image processing, detection, segmentation, tracking, and camera-based applications. Applied AI techniques to tackle complex challenges, delivering impactful solutions across various domains. Skilled in comprehensive data analysis with a strategic mindset. Eager to contribute dynamic skills and innovation to cutting-edge AI projects, ready for challenges at the forefront of technological advancement.

WORK EXPERIENCE

Jr AI Developer(Computer vision)

Ombrulla

03/2023 - 03/2024

- Spearheaded defect detection initiatives across diverse industries, implementing advanced object detection and segmentation models, resulting in a significant reduction in product defects and enhancing overall product quality.
- Pioneered retail analytics solutions, integrating demographics, emotion analysis, gesture and posture estimation, and customer behavior insights to drive actionable business strategies.
- Implemented cutting-edge technology for people tracking, PPE detection, fire, smoke, fall detection, and fatigue detection, enhancing safety protocols.

Machine Learning Intern

Xena Intelligence

09/2022 - 01/2023

- Forecasted next month's sales of Amazon business using various time series predictive models.

Data Science with AI Trainee

ExpertzLab Technologies

12/2021 - 09/2022

- Designed and implemented a website structure for product placement utilizing HTML5, CSS, and JS.
- Utilized Pandas, NumPy, scikit-learn, Matplotlib, Seaborn, Power BI, and MySQL for comprehensive end-to-end data management, including data analysis, visualization, preprocessing, feature engineering, and executing advanced machine learning tasks.
- Developed advanced machine learning and deep learning models, deployed using Flask.
- Utilized GitHub for efficient version control and collaboration.
- Extracted actionable insights from data analysis.

PROJECTS

AI Inspection for Defect Detection:

Utilized advanced artificial intelligence methodologies to engineer robust defect detection systems across diverse industries, significantly elevating quality control standards and operational efficiency.

Key Responsibilities and Achievements:

- Spearheaded the development and deployment of cutting-edge defect detection solutions leveraging YOLOv8 architecture across multiple sectors, including concrete, steel, textiles, and automotive.
- Orchestrated the seamless integration of real-time monitoring capabilities and sophisticated alarm systems.
- Collaborated cross-functionally to optimize algorithms, meticulously fine-tuning parameters to drastically reduce false positives and enhance the precision of defect identification.
- Implemented highly efficient data analysis pipelines, enabling the extraction of actionable insights vital for informed decision-making and continuous process enhancement.
- Played a pivotal role in the refinement of defect detection criteria and the optimization of model performance, resulting in unparalleled levels of accuracy across all projects.

CERTIFICATES

NACTET Training Course Certificate
(ExpertzLab Technologies)

Data Science with Machine learning Specialization Workshop
(Eduzell)

Python
(coursera)

LANGUAGES

English

Malayalam

Tamil

Retail Analytics:

Developed and deployed a comprehensive retail analytics solution encompassing real-time tracking of individual customer interactions and clustering techniques to analyze engagement dynamics with staff. Leveraged advanced computer vision methodologies to capture demographic insights, including gender, age, and emotional sentiments. Implemented gesture recognition and posture estimation algorithms to conduct granular assessments of customer behavior.

Key Responsibilities and Achievements:

- Achieved real-time kiosk monitoring, providing insights into customer engagement and behavior for targeted marketing strategies.
- Utilized computer vision technologies to extract actionable insights on customer demographics and emotional responses, enhancing targeted marketing strategies.
- Applied gesture recognition and posture estimation for detailed customer behavior analysis, refining service delivery.
- Produced daily and weekly heatmaps to visually illustrate customer traffic patterns and identify strategic hotspots for optimization.
- Played a pivotal role in driving data-driven strategies aimed at elevating the overall customer experience and optimizing production processes in the retail sector.

Data Analysis:

Contributed to diverse analysis projects, utilizing predictive modeling and exploratory data analysis (EDA) to extract actionable insights.

Key Responsibilities and Achievements:

- Conducted comprehensive operational data analysis, applying time series forecasting and regression models to optimize efficiency.
- Performed thorough exploratory data analysis to uncover patterns and trends vital for decision-making, utilized advanced statistical techniques to identify patterns, and collaborated with the data analysis team to create insights, develop prediction models, and visualize complex datasets, translating them into actionable business.

Real-time Detection and Analysis Platform:

Developed a comprehensive platform aimed at facilitating efficient dataset creation, training of YOLOv8 models, and real-time object detections. Leveraging cutting-edge frame processing techniques, the platform incorporates advanced filters to automatically detect objects with high accuracy.

Key Responsibilities and Achievements:

- Developed algorithms to automatically generate datasets in YOLO format, simplifying the process and ensuring compatibility with YOLOv8 model training.
- Leveraged GPU resources to accelerate YOLOv8 model training, enhancing performance and efficiency for accurate defect detection.
- Implemented real-time defect detection on live camera feeds and utilized signal processing techniques to enhance accuracy by identifying abnormal pixels within frames.
- Engineered automation systems for seamless and continuous execution of dataset creation, model training, prediction, and inferencing reduces manual intervention and maximizing efficiency.

Predictive Insights Web Application:

Utilized Flask framework to develop and deploy a sophisticated web application for predicting events and visualizing results in real-time. Implemented high-quality styling and user-friendly interface design to enhance usability and engagement.