Arka Ghosh

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CAREER OBJECTIVE

Aspiring Machine Learning Engineer with more than 1 Year of experience in developing and deploying end-to-end ML solutions. Eager to contribute technical expertise in personalization, Computer Vision, Deep Learning and GenAI to build scalable and impactful systems.

EDUCATION

•FUTURE INSTITUTE OF TECHNOLOGY/MAKAUT
B.Tech in Computer Science And Engineering(AI & ML)
JUL 2024 | Kolkata, West Bengal
CGPA: 8.81

•NAVA NALANDA HIGH SCHOOL, WEST BENGAL/WBCHSE
March 2020 | Kolkata,West Bengal
12th: 83.33 %

•NAVA NALANDA HIGH SCHOOL, WEST BENGAL/WBBSE
March 2018| Kolkata,West Bengal
10th: 74.14 %

LINKS

Github:// arkaghosh566
LinkedIn:// ARKA GHOSH

LANGUAGES

• English: Full Professional Proficiency
• Bengali: Native or Bilingual Proficiency
• Hindi: Limited Working Proficiency

SKILLS

PROGRAMMING

Languages:
• Python • C++ • Java • JavaScript • SQL
Libraries & Frameworks:
• NumPy • Pandas • Scikit-learn • TensorFlow • PyTorch • OpenCV • Keras • Matplotlib • Seaborn
Databases:
• SQL • MongoDB • SQLite
Deployment Tools:
• Flask • Docker • Streamlit

WORK EXPERIENCE

CAPSITECH | Assistant System Engineer

2024 – Present| Jodhpur,Rajasthan

• Developed a computer vision-based employee tracking system for real-time monitoring of workplace activity, improving operational oversight and accountability.

• Built a high-precision hair follicle detection model capable of identifying minute follicles and calculating their orientation angles, contributing to advancements in dermatological and cosmetic analysis.

• Developed a deep learning-based person counting system for crowded environments using ResNet50 with Feature Pyramid Network (FPN) as the backbone. Focused on improving detection accuracy in dense scenes and optimizing the model for real-time performance.

• Extracted high-quality silhouettes for gait analysis by integrating YOLOv8 with Segment Anything Model (SAM). Preprocessed frames to generate accurate human masks from surveillance video, enabling downstream gait feature extraction such as GEI and HOG.

• Implemented a head detection pipeline using YOLOv8 trained on a custom merged dataset comprising both colored and black-and-white head image datasets. Fine-tuned the model to generalize across visual domains and applied ensemble learning using multiple YOLOv8 weight variants to boost prediction robustness.

• Researched and implemented multiple tracking algorithms including SORT, DeepSORT, ByteTrack, BoT-SORT, and OC-SORT, evaluating their performance across diverse surveillance scenarios to enhance multi-object tracking accuracy and robustness.

CERTIFICATIONS

MACHINE LEARNING

Oct 2022 | COURSERA

- Acquired proficiency in Decision Trees, Artificial Neural Networks, Logistic Regression, Recommender Systems, and Linear Regression

CONVOLUTIONAL NEURAL NETWORKS

Jul 2023 | COURSERA

- Acquired expertise in Deep Learning, Facial Recognition Systems, Convolutional Neural Networks, TensorFlow, Object Detection, and Segmentation.

GOOGLE DATA ANALYTICS

Sept 2023 | COURSERA

- Acquired proficiency in analytical skills including data cleaning, analysis, and visualization, along with proficiency in tools such as spreadsheets, SQL, R programming, and Tableau.

GOOGLE ADVANCED DATA ANALYTICS

Sept 2023 | COURSERA

- Acquired proficiency in building regression and machine learning models for data analysis and interpretation. Skilled in creating data visualizations and applying statistical methods to investigate data.