Joyal Kenus

Machine learning engineer

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SUMMARY

Machine Learning Engineer with proven expertise in developing emotion recognition systems and deploying production-scale AI solutions. Demonstrated track record in architecting and optimizing transformer-based models, with a focus on synthetic data generation and scalable ML pipelines. Experienced in implementing deep learning frameworks including PyTorch for real-world applications in computer vision and human-AI interaction. Consistently delivers innovative solutions by combining technical expertise in model architecture design with practical implementation strategies. Notable achievements include developing real-time facial recognition systems and contributing to cutting-edge emotion AI research at Onairos. Strong foundation in both theoretical ML concepts and hands-on engineering, with experience in end-to-end ML workflow optimization and deployment.

WORK EXPERIENCE

Machine Learning Engineer, At Onairos, London, United Kingdom **Oct 2024 - Present**

- Research and development: Helping in research about their cutting edge AI emotion model.
- Emotion Model Development: Contributed to the research and development of advanced emotion recognition models.
- Model Training: Prepared and trained new AI models incorporating dataset filtering and manipulation techniques.
- Synthetic Data Generation: Developed systems for creating synthetic data labeling to enhance dataset quality.
- Implementation: Utilized PyTorch, transformer models, MLPs, and neural networks in model development workflows.
- Algorithm Optimization: Improved model performance through tuning and optimization of machine learning algorithms.
- Data Preprocessing: Handled data cleaning, normalization, and augmentation to prepare datasets for training.
- Version Control: Used Git for code versioning and collaboration across development teams.

AI Integration Specialist, Freelance in Upwork, London, United Kingdom **May 2024 - Sep 2024**

- GPT Integration: Implementing custom GPT solutions for small to medium-sized businesses and startups.
- API Development: Creating robust APIs to seamlessly integrate GPT models with existing business systems.
- Software Development: Creating personalized softwares for internal company needs leveraging AI.
- Scalability Planning: Designing AI solutions that can grow with the client's business needs.
- Client Education: Guiding businesses in effectively leveraging GPT technology for their specific use cases.
- Communication : Ensure proper communication to the client about the deliverables and solutions.

EDUCATION

University of Central Lancashire, Preston, United Kingdom - *Master of science, Mechatronics and Intelligent Machines - GPA: 4.0* **Jan 2021 - Jul 2022**

Nehru Institute of Engineering and Technology, Coimbatore, India - *Bachelor of Engineering, BE, Mechatronics Engineering - GPA: 3.4* **Jun 2016 - Jul 2020**

PROJECTS

Semi-Autonomous Face Orientation Controlled Wheelchair Driving System,

- Developed a Facial orientation recognition system with Opencv and tested it on an Arduino robotic car in real time, integrated powertrain calibration techniques to optimize the wheelchair system for varying commands.
- Implemented an obstacle avoidance system using Arduino-controlled ultrasonic sensors.
- Constructed a WeBots 3D simulation and reconstruction of a robotic car to confirm precision of the facial orientation-based driving system.

Eva - On demand personal Yoga companion,

- Developed a fully functional web app which gives real time feedback on yoga poses.
- Carefully tested the workflow and session management for the AI model to ensure smooth feedbacks.
- Used the elevenlabs for voice, Custom google search engine for poses and Gemini 1.5 pro for vision.

AI Skill Analyser for Reputy.io,

- Designed a soft skill analyser from scraped social media data.
- Implemented Retrieval Augmented generation (RAG) based tuning with Multimodal GPT to extract talent.

Bionic Hand for Handicapped to Ride a Motorbike,

- Engineered a prototype for a bionic hand enabling disabled individuals to control motorbike acceleration.
- Designed the bionic hand to detect bicep rotations, linking these to the bike's acceleration.

SKILLS

Programming : Python, Javascript, C++
Data Tools : SQL, Tableau, PowerBi
Machine Learning : pytorch, MLops, Data Pipelines, TensorFlow, keras, Scikit-Learn

Technologies	**:**	Arduino, MATLAB, OpenCV
Robotics	**:**	Microcontrollers, Embedded systems, PLC, Pneumatic systems, Path Planning
Cloud	**:**	AWS, Azure, GCP