Johnson Electric International
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innovating motion

Recommendation for Kaushik Kumar

To Whom It May Concern,

I am writing to recommend Kaushik Kumar, who worked under my supervision as a Data Scientist at Johnson Electric from June 2023 to May 2024, in Chennai, Tamil Nadu, India.

During his tenure, Kaushik developed AI-driven solutions that significantly optimized manufacturing processes. He effectively reduced End-of-Line (EOL) testing time by 72%, generating monthly savings of $74,357. Utilizing Kalman Filters and SQL, Kaushik built predictive models for Tesla AGP Water Pumps, which were deployed via Docker on virtual machines, enhancing real-time efficiency.

Kaushik's expertise also extended to developing an ensemble model (Gradient Boosting & Random Forest) for actuator classification, achieving an impressive 93% accuracy and reducing test cycle time by 83%. He integrated this with a PyQt5 GUI and Power BI for enhanced exploratory data analysis (EDA) and anomaly detection.

Additionally, Kaushik optimized pressure leakage testing in ITMS Gen2 Water Pumps using Curve Fitting and Support Vector Regression (SVR), reducing test time from 160 seconds to 45 seconds, with a 0.93 correlation coefficient and zero false positives. He also led the development of PLM Teamcenter Chatbots, integrating Streamlit, Azure OpenAI, Marqo AI, and Solr for document retrieval, securely deployed on Azure Virtual Desktop and VM instances.

Furthering defect detection efforts, Kaushik worked on SNADE AI, employing ensemble models to classify actuators based on vibration frequencies and reducing test cycle time to 8 seconds (83% faster than EOL testing). He significantly contributed to synthetic image generation to predict defects, enhancing ML model performance. His development of a GPT-powered internal chatbot for enterprise documentation retrieval with company-specific AI fine-tuning was innovative and highly effective.

Kaushik Kumar's contributions led to considerable efficiency improvements, cost reductions, and advancements in AI-driven quality control across our manufacturing processes. His proficiency in statistical modeling, Python programming, and numerous other skills make him a valuable asset to any organization.

Please feel free to contact me for any further information regarding Kaushik's exemplary performance or other inquiries.

Sincerely,

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