Ramachandra Anirudh Vemulpalli

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PROFILE

Highly motivated recent graduate with a diverse skillset encompassing Full-Stack development (ReactJS, VueJS, NodeJS, Django) and proficiency in Python, Java, and Linux terminals. Passionate about exploring AI, particularly Machine Learning, Deep Learning, and NLP. Familiar with SQL (Oracle, PostgreSQL) and NoSQL (Hadoop, MongoDB) databases. Eager to leverage my knowledge and learn with a dynamic team environment to contribute to innovative projects.

SKILLS

Java	VueJS	Linux Terminals
Python	NodeJS	Databases
Django	ReactJS	Artificial Intelligence

ACADEMIC PROJECTS

Blockchain Based Supply Chain Management   **Jul 2023 - Present**
Domain: Blockchain

In today's complex supply chains, opacity and inefficiency reign supreme. This project tackles this head-on. By leveraging the immutable audit trail of blockchain technology, we provide an ecosystem of trust and transparency. From streamlining logistics to eliminating counterfeiting, our solution empowers stakeholders with real-time data, driving cost reductions, boosted consumer confidence, and ultimately, a more sustainable and ethical future for global trade.

Key Features:

- Transaction records, product information, and order details are permanently secured on the Ethereum blockchain, ensuring tamper-proof documentation and preventing unauthorized modifications.
- All stakeholders can access and track product movement in real-time, from origin to final destination, fostering visibility and trust throughout the supply chain.
- Automate key processes, enforce contractual obligations, and streamline transactions among parties, reducing friction and manual errors.
- Intuitive ReactJS front-end enables stakeholders to easily register, place orders, update order status, and track shipments, promoting efficient collaboration.
- Node.js and Web3.js facilitate seamless interactions with the Ethereum blockchain, manage data flows, and ensure smooth system operations.
- MySQL database stores sensitive information, order details, and transaction records, providing a reliable repository accessible to authorized parties.
- The project's modular architecture allows for integration with additional features and functionalities, adapting to evolving supply chain needs and embracing future advancement in blockchain technology.

This project successfully demonstrates the transformative power of blockchain technology. By combining Ethereum's security, smart contracts' automation, and a user-friendly interface, we pave the way for a more transparent, efficient, and trustworthy supply chain ecosystem, unlocking its potential to benefit all stakeholders and foster a more sustainable future for global trade.

Image Deblurring Using Deep Learning   **Jan 2023 - Jun 2023**
Domain: Deep Learning

Capturing blurry photos due to camera shake or low light shouldn't erase precious memories. This project tackles this frustration head-on. By harnessing the power of deep learning, we transform blurry images into sharp, vibrant snapshots, restoring cherished moments and enhancing visual clarity for diverse applications, from medical imaging to security footage. With every pixel brought back into focus, we unlock a clearer world of possibilities.

Key Features:
- Utilizes a combined model of Convolutional Neural Network and Autoencoders, expertly trained on the RealBlur dataset for effective image deblurring.
- Provides a simple and intuitive interface for users to seamlessly upload blurry images and view the deblurred results without requiring technical expertise.
- Integrates powerful image processing libraries like OpenCV, Scikit-image, and Pillow to handle image manipulate tasks efficiently, ensuring optimal image preparation and display.
- Leverages PyTorch's dynamic computational graph capabilities for efficient model training, experimentation, and potential model optimization in the future.
- Addresses real-world challenges in various domains, including: Recovering personal photos affected by motion blur or low lighting; Enhancing clarity in medical imaging for improved diagnosis; Sharpening surveillance footage for better identification and analysis; Restoring historical or damaged images for preservation and research

Project Repository: https://github.com/aniru-dh21/Image-Deblurring-App

Attendance Management System Using Face Recognition   **Aug 2022 - Nov 2022**
Domain: Machine Learning

Clocking in and out just got smarter. This project eliminates manual roll calls and buddy punching. By harnessing the power of facial recognition technology, we automate attendance tracking with unparalleled accuracy and efficiency. No more wasted time, no more human error - just effortless record-keeping for a steam-lined and reliable system, empowering organizations and employees alike.

Key Features:
- Leverages the capabilities of OpenCV and face_recognition libraries for seamless real-time identification of individuals within group photos, eliminating manual attendance processes.
- Stores employee encodings, personal information, and attendance records within a MySQL database, ensuring organized and protected data management.
- Provides an intuitive interface for easy group photo uploads, attendance visualization, and system interaction, accessible to users with varying technical backgrounds.
- Integrates with the Twilio API to automatically send attendance confirmation SMS messages to Students' parent registered phone numbers, enhancing communication and personal record-keeping.
- Displays processed group photos with clear name overlays for each identified individual, providing immediate attendance confirmation and visual verification for transparency and accountability.

Project Repository: https://github.com/aniru-dh21/Attendance-Management-System-Using-Face-Recognition

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EDUCATION

Gokaraju Rangaraju Institute of Engineering and Technology

Bachelors of Technology in Computer Science Engineering (Data Science)
2020 - Present
CGPA: 8.5/10

PUBLICATIONS

Deep Learning based Automated Image Deblurring   **Oct 2023**
Domain: Deep Learning
Blurry photos hold captive memories begging to be freed. This paper empowers you to reclaim them. By leveraging the power of deep learning, we automatically transform blurry images into crystal-clear snapshots, restoring precious moments and enhancing visual clarity across diverse fields, from everyday photos to medical imaging. With every pixel brought back into focus, we unlock a world of vibrant possibilities, one sharp image at a time.

Key Features:
- Employs deep learning to automatically deblur images, eliminating the need for manual adjustments or expert intervention
- Combines Convolutional Neural Networks (CNNs) and Autoencoders, trained on the RealBlur dataset, for effective image analysis and restoration.
- Offers a simple and intuitive interface for users to effortlessly upload blurry images, initiate deblurring, and view results without requiring technical expertise.
- Integrates OpenCV, Scikit-image, and Pillow efficiently handle image preparation, manipulation, and display tasks.
- Leverages PyTorch's dynamic computational graph to facilitate model training, experimentation, and potential future enhancements.

DOI: https://doi.org/10.1051/e3sconf/202343001052

CERTIFICATIONS

CCNA: Introduction to Networks   Mar 2023

DevNet Associate   Mar 2023

AWS Academy Data Analytics   Nov 2022

Responsive Web Design   Jun 2022

AWS Academy Cloud Foundations   Mar 2022

ADDITIONAL LINKS

LinkedIn
Frontend Mentor
LeetCode
Credly