Arnab Banik

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EXPERIENCE

Research Intern
Samsung   December 2023 - August 2023, Remote
· Built a lightweight CNN model for the classification of documents and scenes.
· Evaluated and benchmarked image classification models, such as MobileNet and EfficientNet, to optimize performance.
· Constructed an extensive dataset comprising 53,000 images through the strategic integration of image synthesis tools like SynthDog and SynthTiger, in addition to sourcing data from the Unsplash API and Kaggle datasets.
· The CNN model achieved > 90% accuracy for the tests performed.

PROJECTS

CleanConnect - A minimalist social media app for a clutter-free online experience.
Vellore Institute of Technology · https://github.com/Tech-Taxi/social-media-app · May 2023 - June 2023
· Developed and tested the CleanConnect app using the MERN Stack.
· Handled user management and authentication with Mongoose schema methods and JWT and cookies.
· Added security measures to the backend API with safeguards against cross-site scripting, NOSQL injection and DOS attacks.
· Implemented a comprehensive error-handling system capable of effectively addressing a wide range of errors, including duplicate key errors, validation issues, JWT errors, and JWT expiration errors, with tailored techniques for both development and production environments, ensuring robust application performance and reliability.
· Employed React's virtual DOM to create a highly responsive and performance-optimized frontend.

Vend-O-VIT - A digital commercial platform for college students
Vellore Institute of Technology · https://github.com/ArnabBanik-repo/E-Commerce_VIT · June 2022 - July 2022
· Developed an online platform for the commerce of second-hand goods for college students.
· Built the platform with the MERN stack, incorporating the Express.js framework and the MUI component library for enhanced functionality and user interface.
· Programmed a robust error handler managing duplicate key errors, JWT token errors, and validation errors on the backend to manage development and production errors.
· Designed and implemented a scalable MVC architecture to facilitate seamless integration of additional features.

Music Recommender
Vellore Institute of Technology · https://github.com/AtharvaShekatkar/Music_Recommender/ · November 2021 - February 2022
· Developed a music recommendation system designed to provide users with personalized music suggestions based on their current preferences.
· Conducted a comprehensive evaluation of multiple machine learning models, including K-Means, Birch, Mean Shift, and K-Medoids, analyzing the outcomes to identify the optimal clustering algorithm for the given use case.
· Utilized Python along with libraries such as NumPy, Pandas, and Scikit-learn, collaborating on a college project within the Google Colab environment.

EDUCATION

Bachelor of Technology in Computer Science with Specialization in Data Science
Vellore Institute of Technology · Vellore · 2024 · 9.40
· Stood 5th in my branch in the year 2022-2023

CERTIFICATIONS

MERN Full Stack Internship Programme
Ethnus · 2023
· Certified in developing and managing full stack web applications

SKILLS

Java | Website Development | Algorithms | Javascript | React JS | Node JS | C++ | C | Python | R | Git | HTML | CSS | SASS