

FULL STACK MERN AI IMAGE GENERATION APP

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Engineering degree in Computer Science and Engineering

By

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INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **A.M.Sri Kumara Swamy(40111496)** , **Y.Shyam Prakash(40111457)** who carried out the entitled "FULL STACK MERN AI IMAGE GENERATION APP" under my supervision from November 2023 to April 2024.

Internal Guide

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DECLARATION

I, **A.M.Sri Kumara Swamy**(Reg no-40111496) hereby declare that the Project Report entitled "**FULL STACK MERN AI IMAGE GENERATION APP**" done by me under the guidance of **Dr. Minu Susan Jacob P.h.D** at Sathyabama Institute Of Science And Technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering degree in **Computer Science and Engineering**.

DATE: 15-04-2024

PLACE: Chennai



SIGNATURE OF THE CANDIDATE

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ABSTRACT

This is a full-stack web application developed using the MERN stack. The application allows users to create AI-generated images using OpenAI's DALL-E API, based on their input text. The speciality of the developed application is, it offers a modern and minimal design with dynamic layouts, hover effects, and sharing options with the community. This project was inspired by one of such powerful AI image generation models: OpenAI's DALL-E. The user can then share their custom AI-generated image with the community by clicking on the "Share with Community" button. This sends a request to the server to add the image to the community showcase section on the home page. The project involves working on both the front-end and back-end of the application, so that allowed me to gain a better understanding of full-stack web development. Developing the application using the MERN stack provided me an opportunity to learn about the different technologies involved, including MongoDB, Express.js, React, and Node.js. Full Stack MERN (MongoDB, Express.js, React, Node.js) AI Image Generation App is a comprehensive software project that combines cutting-edge technologies to create an innovative application. This project aims to harness the power of artificial intelligence to generate images with diverse styles, patterns, and content. The system utilizes the MERN stack, offering a robust and scalable foundation for the application. In the ever-evolving landscape of technology and artificial intelligence, the Full Stack MERN AI Image Generation App represents an innovative and practical solution that merges the worlds of web development, machine learning, and creative visual content generation. This project aims to create a comprehensive application that empowers users to generate unique, personalized images through a web-based interface. The project's core technology stack includes MongoDB for data storage, Express.js for server-side development, React.js for the frontend user interface, and Node.js to orchestrate the server. Additionally, it incorporates advanced machine learning models for image generation, enhancing its capabilities and user experience.