Matrim Pathak

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EDUCATION

Vellore Institute of Technology

Masters in Computer Science and Engineering with specialization in AI/ML

Brainware Group of Instituions

Bachelor in Computer Science and Engineering

Vellore, Tamil Nadu

Sept. 2022 - July 2024

Kolkata, West Bengal

Aug. 2018 - Jun 2022

EXPERIENCE

Graduate Intern

Aug. 2023 – July 2024

Bangalore, Karnataka

RSA Security LLC

- Developed a full-stack web application using NextJS, TailwindCSS, web-scraper, and MongoDB, streamlining the development pipeline and enhancing functionality.
- Managed customer escalation tickets by providing timely and effective resolutions, leading to improved client satisfaction and retention.
- Collaborated with cross-functional teams to deliver high-quality solutions that met clients' requirements and project goals.

Projects

Personal Portfolio Website | NextJS, TailwindCSS, Framer Motion, Firebase

June 2024

- Designed and developed a personal portfolio website with stunning animations using Framer Motion.
- Implemented a dynamic delivery system displaying data from a Firebase backend.
- Created a contact form with user reply functionality.
- Link: www.matrimpathak.com

FlowBoard | Next.js, Redux, TailwindCSS, AWS, PostgreSQL

July 2024

- Developed a fully functional project management app, FlowBoard, with pages for search, users, teams, and timelines.
- Implemented features like light/dark mode, responsive design, and email/password authentication.
- Utilized a robust tech stack including Next.js, Redux Toolkit Query, TailwindCSS, TypeScript, AWS (EC2, RDS, S3, Cognito), and PostgreSQL.
- Integrated real-time data visualization using Recharts to track project progress and team performance.

CarePulse | Next.js, TypeScript, React Hook Form, TailwindCSS, Appwrite

August 2024

- Developed a healthcare management system, CarePulse, to streamline doctor appointment bookings with real-time SMS notifications and authentication.
- Designed a comprehensive registration form for personal details, medical history, and identification, along with a confirmation screen and admin access permissions.
- Implemented an admin panel for scheduling and canceling appointments, integrated SMS confirmations via Twilio, and used Sentry for performance analysis.
- Utilized Next.js for server-side rendering, nested layouts, and advanced form management with TypeScript, React Hook Form, Zod, Shaden, and TailwindCSS for a modern, responsive UI.

Papers Published

Classification of Histopathologic Breast Cancer Images Using CNN | Deep Learning Project

April 2023

- Developed a CNN-based algorithm to classify breast cancer images as benign or malignant, improving diagnostic accuracy.
- Utilized a dataset of histopathologic images for training and testing, achieving an accuracy of 94.28%.
- Implemented advanced model features including three convolutional layers, max pooling, dropout, and a SoftMax classifier
- Analyzed and validated model performance using confusion matrices and metrics like accuracy, precision, and recall.
- Demonstrated potential for clinical application with high sensitivity and specificity, aiming to assist radiologists and reduce diagnostic errors.

TECHNICAL SKILLS

Languages: Java, Python, C, SQL (Postgres), JavaScript, HTML/CSS

Frameworks: React, Node.js, NextJS, Redux, Redux Toolkit Query, TailwindCSS, Material-UI, Framer Motion, Recharts, React Hook Form, Zod, Shadon, Express.js, Prisma, AWS (EC2, RDS, S3, Cognito), Appwrite, Twilio

Developer Tools: Git, VS Code, Visual Studio, Sentry

Libraries: pandas, NumPy, Matplotlib, TensorFlow, Keras, OpenCV