NEEL PATIL

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OBJECTIVE

Motivated Full Stack Developer with hands-on experience in the MERN stack, dedicated to building scalable, responsive, and user-focused web applications. Actively seeking opportunities to contribute to impactful products through clean code, performance optimization, and intuitive UX design.

SKILLS AND ABILITIES

HTML-5 | CSS | Bootstrap | Tailwind CSS | Javascript | ReactJS | Redux

NodeJS | Express | MongoDB | Java | Python | OOPS

Git | Git Hub | Docker | Gen AI

EXPERIENCE

Ridipt Technologies – Remote   **11.2023 – Present**

Full Stack Web Developer
Frontend Development

- Developed dynamic, responsive UIs using ReactJS, Chakra UI, HTML, and CSS.

- Implemented modern design principles using Flexbox, Grid, and media queries for cross-device compatibility.

- Utilised React hooks (useState, useEffect, useContext) and Redux for robust state management.

- Conducted code reviews, debugging, and performance optimisation using Chrome DevTools, React DevTools, and ESLint.

Backend & Full Stack Tasks

- Designed and implemented modular REST APIs using Node.js and Express.js, following industry-standard conventions.

- Built reusable utilities like:

  1. Standard API response structures

  2. Centralised error handling middleware

  3. Async handler functions for cleaner async/await logic

- Developed scalable Mongoose models for MongoDB across various projects.

- Implemented authentication and authorisation using JWT and bcrypt, including role-based access control. Used MVC architecture to maintain separation of concerns and clean code structure.

- Managed version control and collaboration using Git and GitHub workflows (feature branching, PRs, conflict resolution).

AI & Data Science Projects

- Independently developed a Skin Disease Classification AI using VGG16 and deep learning techniques.

- Performed data preprocessing, model tuning, and evaluation to ensure high classification accuracy.

- Conducted exploratory data analysis and implemented image-based deep learning workflows.

Client Project Support

- Debugged and fixed a client's email scraping tool, resolving SSL and request handling issues.

- Improved scraping logic and ensured successful data retrieval and parsing from dynamic web sources.

EDUCATION

D. Y. Patil College of Engineering – Pune, Maharashtra   **2019-2023**

Bachelor in Technology - B.Tech

Major : Computer Science and Technology

Minor : Artificial Intelligence and Machine Learning

CGPA : 7.48

FULL STACK PROJECTS

1. CashKaro CLone —

- Built a full-stack cashback and affiliate deals platform inspired by CashKaro.
- Implemented user authentication using JWT and bcrypt, including login/signup and protected routes.
- Built responsive UI using Chakra UI, focusing on clean design and accessibility.
- Designed and consumed RESTful APIs using Express and MongoDB with proper MVC architecture.
- Ensured real-time feedback using toasts, loaders, and conditional rendering.
- Followed RESTful API design and MVC architecture, ensuring scalability and maintainability.
- Gained hands-on experience in user role management, state handling, and scalable backend logic.

ACADEMIC PROJECTS

1. Ballistic Program Control —

- Designed and developed a HUD (Heads Up Display) system using projectile motion physics to assist with targeting by predicting projectile drop.
- Integrated sensor-based corrections for wind, air drag, and gyroscopic movement to enhance accuracy.
- Achieved 70% accuracy during simulation tests within a 200–300 yards range, validating core functionality.
- Built the user interface using PyQt5, ensuring real-time data display and usability.
- Deployed the system on Raspberry Pi, enabling portable and embedded operation.
- Key Learnings: Deepened understanding of software design patterns and their role in building scalable, maintainable codebases; gained hands-on experience in combining hardware, UI, and physics-based modelling.

2. Chess Playing Robotic Arm

- Designed and developed an autonomous robotic arm capable of playing chess by integrating AI algorithms, computer vision, and robotic manipulation.
- Implemented real-time board analysis and move calculation using the Stockfish chess engine, with physical piece movement via servos controlled through Arduino.
- Developed a custom API in Python to manage communication between the AI engine and hardware components.
- Demonstrated successful gameplay against human opponents, highlighting effective integration of software and hardware components.
- Addressed challenges in move detection accuracy caused by variable lighting conditions; identified improvements needed in vision algorithms.
- Key Learnings: Strengthened problem-solving and debugging abilities, optimised application performance, and gained practical experience in robotics, embedded systems, and AI integration.

CERTIFICATION

- **Develop GenAI Apps with Gemini and Streamlit**
  Google Cloud | Jun 2025

- **Build Real World AI Apps with Gemini and Imagen**
  Google Cloud | May 2025

- **Prompt Design in Vertex AI**
  Google Cloud | May 2025
  Skills: Prompt Engineering, AI

- **Computational Thinking with Beginning C Programming**
  University of Colorado | Aug 2020

- **Simulation, Algorithm Analysis, and Pointers**
  University of Colorado | Aug 2020