Dil Bahadur Tharu

Computer Engineer

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Motivated and detail-oriented Computer Engineer student with a strong foundation in programming, problem-solving, and project management. Seeking opportunities to leverage my skills in software development and contribute to innovative solutions.

EXPERIENCE

Software Developer   Kathmandu

Intern   Jan, 2022 - Present

EDUCATION

Bachelors (Last year)   kathmandu

Cosmos College of Management and Technology affiliated by Pokhara Unoversity   Apr, 2020 - Present

+2   Kohalpur

Bal Vidhya Mandir College   Jan, 2017 - Jan, 2019

PROJECTS

Online Cake Shopping(Web site)

- Role: Frontend Developer and System Designer
- Designed and implemented the user-friendly interface for browsing, selecting, and ordering cakes using [technologies, e.g., HTML, CSS, JavaScript].
- Developed secure and efficient payment integration, including options for "Pay on Delivery" and "Khalti."
- Collaborated with the backend team to ensure seamless order management and real-time cart updates.
- Improved customer experience by optimizing loading times and introducing responsive design.

https://github.com/dilbdr486/online-cake-shopping

Project Management System(Dsaktop Software)

- Designed and implemented the user-friendly interface for Adding students details, searching, and file(report) uploading using [technologies, e.g., Dot Net(C#),MySQL].
- Created a robust database structure for storing project details, user roles, and deadlines.
- Automated notification and reporting features to ensure timely updates for all students.

https://github.com/dilbdr486/Project-Management-System-Cosmos

Youtube Clone

- Designed and developed an intuitive and interactive user interface for a YouTube-like platform using HTML, CSS, JavaScript, and modern frameworks such as React.
- Implemented core features including video browsing, searching, and filtering by categories or tags, ensuring an engaging user experience.
- Developed a secure authentication system for user sign-ups, logins, and personalized content recommendations using technologies like Firebase Authentication or JWT.
- Integrated a video player with features such as play/pause, volume control, full-screen mode, and playback speed adjustments using libraries like Video.js.
- Worked closely with the backend team to manage video uploads, streaming, and storage, utilizing cloud solutions like AWS S3 or Google Cloud Storage for seamless media management.
- Implemented a comments and likes system with real-time updates and spam detection to enhance community interaction.
- Ensured cross-platform compatibility and responsiveness, delivering a consistent experience on desktops, tablets, and mobile devices.
- Optimized page load times and video streaming performance using techniques like lazy loading, content delivery networks (CDNs), and efficient API requests.

https://github.com/dilbdr486/YoutubeClone

Student Record Management

- Designed and developed a cross-platform mobile application for managing student records using Flutter and Dart.
- Built an intuitive and responsive UI/UX to facilitate seamless navigation between features like student profile creation, record updates, and data retrieval.
- Implemented a secure authentication system using Firebase Authentication to ensure only authorized access to student data.
- Integrated a cloud-based database (Firebase Firestore or MySQL) to store, retrieve, and manage student information, such as personal details, grades, attendance, and course enrollments.
- Created a real-time search and filter functionality to quickly locate student records based on parameters like name, ID, or department.
- Developed CRUD (Create, Read, Update, Delete) operations for student data with efficient state management using Provider or Riverpod.
- Enhanced data security with data encryption during storage and transfer, ensuring compliance with privacy standards.
- Implemented role-based access control, allowing administrators, teachers, and students to access different sets of functionalities based on their roles.
- Optimized performance by introducing features like lazy loading and caching to handle large datasets efficiently.
- Added functionality for generating and exporting reports in PDF/Excel format, aiding teachers and administrators in record management.

https://github.com/dilbdr486/Student-Record-Management-Flutter

e-Gardening Website

- Designed and implemented a visually appealing and user-friendly interface for an e-gardening website using HTML, CSS, JavaScript, and frameworks like React or Vue.js.
- Created an intuitive product catalog for browsing plants, gardening tools, and accessories with filters by category, price range, and plant type.
- Developed an interactive plant care guide section that provides users with detailed care tips for various plants, including watering schedules, sunlight requirements, and soil recommendations.
- Collaborated with the backend team to integrate real-time inventory management and order processing using RESTful APIs.
- Integrated secure payment gateways such as PayPal, Stripe, or Razorpay to facilitate online transactions for product purchases.
- Implemented a user account system for customers to manage orders, track deliveries, and create wishlists.
- Enhanced the shopping experience with a dynamic shopping cart that updates in real-time, showing total cost and itemized details.
- Ensured a responsive design for seamless browsing on desktops, tablets, and mobile devices.
- Optimized page load times by using techniques like image compression, lazy loading, and CDN integration.
- Integrated a live chat feature to provide instant customer support using tools like Tawk.to or custom chatbot solutions.

https://github.com/dilbdr486/Garden-Website

AI ChatApp

Developed a smart conversational application that extracts and processes data from PDF documents and websites using advanced Natural Language Processing (NLP) techniques, enabling users to interactively query unstructured data through a chat interface.
Key Features:

- PDF Data Extraction: Parsed and embedded content from uploaded PDF files, allowing real-time querying of the document.
- Web Crawling Integration: Implemented web crawling tools to fetch and index content from URLs for dynamic, up-to-date information retrieval.
- RAG Architecture (Retrieval-Augmented Generation): Combined document retrieval with generative AI to produce context-aware responses.
- LangChain Integration: Utilized LangChain to orchestrate LLMs, tools (like web search or document loaders), and memory components.
- ChromaDB as Vector Store: Stored document embeddings in ChromaDB to enable semantic search over chunked content.
- LLM-Powered QA: Used Large Language Models (OpenAI/GPT) to generate human-like, context-rich answers based on the retrieved information.
- Tools & Agents: Integrated LangChain tools and custom agents for task planning, web search, and document summarization.

https://github.com/dilbdr486/langchain

ChatApp

Developed a real-time chat application enabling seamless communication between users through one-on-one and group chats. Built with a modern React.js frontend and Node.js backend, integrated via Socket.io for instant message delivery. Ensured cross-device usability with fully responsive UI, providing a smooth experience on desktops, tablets, and mobile devices.

Key Features:

- User authentication with JWT and bcrypt for secure access
- Real-time messaging with instant updates using Socket.io
- Support for private and group chats
- Responsive design using Flexbox/Grid and media queries
- Chat history stored in MongoDB for persistence
- RESTful API for user and chat management
- Basic error handling and form validation for UX reliability

https://github.com/dilbdr486/chat-app-ANMIL-task7

ACHIEVEMENTS

Intern(NodeJS)

Contributed to the development of an AI-powered chat application using Node.js and cutting-edge AI tools like LLMs, LangChain (JS/TS), and RAG architecture, enabling intelligent data extraction and conversational interactions with documents and web content.

Key Contributions:

- Built and maintained RESTful APIs using Node.js and Express for file handling, web scraping, and chat services.
- Integrated PDF parsing and web crawling (using Cheerio) to extract and process content for downstream AI processing.
- Implemented RAG (Retrieval-Augmented Generation) workflows using LangChain.js to provide context-aware answers from documents and websites.
- Used ChromaDB (vector store) for semantic search and fast retrieval of embedded document chunks.
- Integrated OpenAI API to generate natural language responses based on extracted and retrieved content.
- Handled user input sanitization, request validation, and API security best practices.
- Collaborated with frontend developers using React for building the chat interface.

TRAINING/CERTIFICATIONS

Web Development Bootcamp

Specialized in designing and developing responsive and interactive websites like E-Gardening Web Application and Online Cake Shopping System using HTML, CSS, JavaScript, and React.

SKILLS

HTML, CSS, JavaScript,Reactjs NodeJs and MongoDb, App Development both in Android and iOS (Flutter), Full Stack Web Development, AI-Powered Knowledge Chatbot, RAG-based Document QA System, Intelligent Document Assistant, LLM-Powered Retrieval Chatbot, Smart PDF & Web Query App

LANGUAGE

English, Hindi, Nepali