

# Rajesh Pal

MERN Stack Developer

Muradpur, Chittagong, Bangladesh. @ ajoypal.raj@gmail.com https://my-personal-portfolio-inky-pi.vercel.app/

#### o Skills o

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#### **JavaScript**

Strong understanding of ES6+ features, event loop, closures, and asynchronous programming.

ES6, DOM, Async/Await, Closures, Hoisting

#### React.js

Experience in building dynamic UIs, using hooks, context API, and implementing routing.

Hooks, Context API, React Router, Redux

#### Node.js

Knowledge of building RESTful APIs, using middleware, authentication, and server-side logic.

Express.js, JWT, Middleware, REST APIs

#### **MongoDB**

Ability to design schemas, optimize queries, and perform aggregation operations.

Mongoose, Aggregation, Schema Design

#### **SQL**

Basic understanding of relational databases, writing queries, and performing joins.

Queries, Joins

#### Socket.io

Good knowledge of WebSockets for real-time communication in chat applications.

#### **Profiles**

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## **Summary**

Passionate MERN Stack Developer with a strong foundation in JavaScript, React, Node.js, and MongoDB, eager to build scalable and efficient web applications. Experienced in developing real-time applications, authentication systems, and RESTful APIs, with a focus on performance, security, and user experience. Skilled in problem-solving, having solved 100+ coding challenges on various online judges. Enthusiastic about competitive programming, deep learning, and modern web technologies.

#### Education

# **Premier University**

Computer Science and Engineering 3.84 BSC **2019-2024** 

## **Projects**

# ChatVerse

A **real-time chat application**, allowing users to create and join chat rooms with instant messaging functionality. Implements **JWT authentication**, message persistence, and WebSocket synchronization for seamless communication.

https://github.com/rajpuc/RealTimeChattingApp#chatverse-documents

## **Learning Management System (LMS)**

A MERN stack-based Learning Management System that enables users to enroll in courses, track progress, and manage educational content. Features include user authentication, role-based access (students/instructors/admins), course management, and interactive dashboards.

https://learning-management-system-orcin.vercel.app/

#### **Taskify**

Designed and developed a **full-stack to-do application** with **secure authentication**, **efficient task organization**,

WebSockets, Event-driven programming

#### **Competitive Programming**

Experience in solving 100+ problems on various online judge.

# **Machine Learning**

Basic knowledge of deep learning concepts, CNN, and Transformers using PyTorch.

CNN, Transformers, Python, PyTorch

and user-friendly UI. Implemented Nodemailer for email verification and password reset functionality, ensuring a seamless user experience.

https://github.com/rajpuc/TaskifyTodo

#### PlainB

A modern and fully responsive e-commerce platform designed to deliver a smooth shopping experience with features like OTP-based login, shopping cart, wishlist, order management, integrated payment gateway, and advanced product search and filtering.

https://github.com/rajpuc/EcomerceProject?tab=readme-ov-file#-e-con

# **Bengali Image Captioning Model**

Built a **Bengali Image Captioning model** using **PyTorch**, leveraging **ResNet152** for visual feature extraction and **Transformer architecture** for generating natural language captions. Employed **BERT Tokenizer** for Bengali text processing and evaluated model performance using the **BLEU Score**. The project bridges computer vision and natural language processing (NLP) in the Bengali language context.

https://github.com/rajpuc/BanglaImageCaptioningModel

#### References

# Syed Md. Minhaz Hossain

Associate Professor, Department of Computer Science and Engineering

Premier University, Chattogram

Phone: 0 1815-811328

Email: minhazpuccse@gmail.com

https://cse.puc.ac.bd/Home/Profile?userName=minhaz\_cse