

PIYUSH KUMAR RANA

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PROJECTS

Full-Stack E-commerce Website

react, redux toolkit, passport js, mongodb, express, node.js

📅 May 2023 – August 2023

- Built an comprehensive e-commerce website with responsive design featuring secure authentication and a streamlined payment gateway.
- Implemented the front-end using React and Tailwind CSS combined with Redux Toolkit for state management and Backend with Express and Node.js integrating Passport JS and JWT for secure authentication, and Stripe for payment gateway.
- Developed ordering capabilities along with filters and sorting options, along with profile management and an admin panel to control inventory including adding, deleting, updating product details.

P2P Group Based File sharing

c++, socket programming, multi-threading

📅 November 2022 – November 2022

- Designed a peer-to-peer Group Based file sharing system for sharing, downloading and managing files within user-defined groups.
- Utilized socket programming for communication and SHA1 hashing to ensure the integrity of downloaded files, strengthening data security in collaborative scenarios.
- Utilized multi-threading to facilitate simultaneous, multi-peer file downloads, achieving a user-authenticated system with group management and optimized file sharing.

IoT Application Deployment Platform

python, docker, kafka, mysql

📅 January 2023 – April 2023

- Contributed in development of a distributed IoT application deployment platform for the management and deployment of IoT applications with microservice based architecture, and integrated scheduling, fault tolerance, and monitoring.
- Contributed to the development of application manager and the formulation of contracts between various modules.
- Employed containerization through Docker, utilized Kafka for inter-module communication within the system and collaborated on the integration of modules.

Adam Optimization and Fashion Image Generation

python, pytorch

📅 April 2018 – May 2023

- Implemented Adam and its variants (e.g. Nadam) in PyTorch and conducted comparative analysis against traditional optimizers (e.g. SGD, Adagrad and RmsProp).
- Implemented a Generative Adversarial Network (GAN) for fashion image generation using the MNIST Fashion dataset. Learned various GAN architectures, including conditional GANs and CycleGAN.

EDUCATION

M.Tech in CSIS

International Institute of Information Technology, Hyderabad

📅 Aug 2022 – present CGPA : 7.76

B.Tech in Information Technology

Kamla Nehru Institute of Technology, Sultanpur

📅 July 2017 – May 2021 CGPA : 8.31

Intermediate

Jawahar Navodaya Vidyalaya, Bijnor

📅 July 2015 – May 2016 Per : 91.60%

SKILLS



COURSE WORK

- Operating System
- Computer Networks
- Internals of Application Server
- Machine Learning

ACHIEVEMENTS

- Secured 98.42 and 98.85 percentiles in GATE CSE 2021 and 2022 respectively.
- Achieved 2nd place in college ML competition for Sentiment Classification on Amazon Reviews.

CERTIFICATIONS

- Machine learning - IIT Kanpur
- Intro To Deep Learning - Guvi IIT Madras

RESPONSIBILITIES

- Served as an Apex Member for PG 2022 at IIIT Hyderabad.
- Managed logistics and operations for a multi-college sports festival for two terms at KNIT Sultanpur.