

AYUSH KUMAR SINGH

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[Portfolio](https://singh-ayush111.github.io/Portfolio/#): https://singh-ayush111.github.io/Portfolio/#

Technical Skills

- **Programming Languages:** Python, JavaScript, SQL(Structured Query Language), Data Structures and Algorithms
- **Front-End:** React.js, HTML, CSS, Bootstrap, Embedded JavaScript(EJS)
- **Back-End and APIs:** Node.js, Express.js, Authentication, OAuth, RESTful APIs
- **Database:** MySQL, PostgreSQL, MongoDB
- **Tools & Platforms:** Git, GitHub, VS Code, Canva
- **Soft Skills:** Design Thinking, Communication, Problem Solving, Collaboration and Teamwork

Education

Bachelor of Technology in Computer Science and Engineering

12/2021 – 05/2025

School of Engineering and Technology, CMR University | CGPA: 7.66

Intermediate(Class XII)

04/2020 - 04/2021

Jawahar Vidya Mandir, Shyamali | CBSE: 71.33%

Projects

Personalized FMCG Recommendation System

2025

- *Technologies Used: Python, Flask, HTML, CSS, JavaScript, SQLite*
- Engineered a Flask-based web application for FMCG product recommendations, utilizing content-based filtering with TF-IDF vectorization and cosine similarity to deliver personalized suggestions.
- Integrated a persistent SQLite database to capture and aggregate user ratings, dynamically enhancing recommendation accuracy through a weighted hybrid scoring system having a precision of 85%.
- Developed RESTful API endpoints for product search, recommendations, and rating submissions, enabling seamless frontend-backend interaction and real-time data updates.

Blog Management Web App

2025

- *Technologies Used: Node.js, Express.js, jQuery, PostgreSQL, EJS, Axios, HTML, CSS*
- Developed a full-stack blog platform with RESTful API endpoints and dynamic EJS templates, enabling users to create, edit, and delete blog posts through an intuitive web interface.
- Integrated PostgreSQL for scalable, reliable data storage and implemented robust client-server communication with Axios and Express, ensuring maintainable and modular code.

Simple File Sharing System

2024

- *Technologies Used: MongoDB, Express.js, React.js, Node.js*
- Developed a full-stack file sharing application using React for the frontend and Node.js/Express with MongoDB for the backend.
- Implemented secure file upload, download, and metadata tracking functionality, including unique shareable links and download count management.
- Integrated RESTful APIs and managed file storage on the server, ensuring efficient handling and retrieval of various file types.

Experience

Python Development Intern

04/2025

Ybi Foundation

- Participated in mentor-led coding sessions to refine and implement advanced Python concepts, improving the algorithmic efficiency and maintainability of solutions focused on DSA and OOP.

Front-end Development Intern

02/2023

IBM Skillsbuild

- Completed an internship with IBM SkillsBuild, where I built responsive web applications using HTML, CSS, and JavaScript through mentor-led sessions and self-paced learning modules.

Certifications

- The Complete Web Development Bootcamp - Udemy
- Python Data Structures and Algorithms - Udemy
- TCS iON Career Edge - Young Professional
- Self-directed Emotional learning for Empathy and Kindness(SEEK) - UNESCO MGIEP

Achievements

- Exceptional Research Award 2022
- Spirit Of Innovation Award 2023
- Leadership in the VUCA World 2023

Publication

"A Hybrid Recommendation System for FMCG Middlemen: Integrating Content-Based and Collaborative Filtering"

-IJRASET - March 2025

- Developed a hybrid recommendation system using content-based and collaborative filtering (TF-IDF, cosine similarity, user ratings) to deliver personalized FMCG product suggestions and address the cold-start problem.