

SYED MUHAMMAD HASHIR ALI

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SKILLS

- **Frontend:** HTML, CSS, JavaScript, Typescript, React.js, Next.js, Tailwind CSS, shadcn/ui
- **Backend:** Node.js, Express.js, REST API, MongoDB, MySQL, Docker
- **Auth & Security:** JWT, Clerk, Bcrypt
- **Tools:** Linux, Git, GitHub, Vercel Deployment

PROJECTS

❖ AI based Waste Classification System (FYP Prototype)

(Next.js, TypeScript, Tailwind CSS, FastAPI, TensorFlow/Keras, MobileNetV2, Python)

- Built an AI-powered web application that classifies uploaded waste images into **6 categories** (cardboard, paper, metal, glass, plastic, trash) using a deep learning model trained on the TrashNet dataset.
- Developed a **MobileNetV2 transfer learning CNN architecture** with custom layers (GlobalAveragePooling → Dense → Dropout → Softmax) achieving reliable multi-class classification performance.
- Implemented a **FastAPI backend with a /predict REST endpoint** for real-time image inference, enabling seamless communication between the AI model and the web interface.
- A **Next.js + TypeScript frontend** with image upload, prediction display, and evaluation metrics visualization using Tailwind CSS.
- Applied **data preprocessing and augmentation** (rotation, shift, zoom, horizontal flip) to improve model generalization on 2,500+ labeled images.
- Built an **automated evaluation pipeline** generating Accuracy, Precision, Recall, F1-Score, and Confusion Matrix, with results dynamically rendered on the frontend.
- Designed a **modular ML workflow** including model training, evaluation scripts, and API integration for scalable AI deployment.

❖ **AI Chat App – Intelligent Conversational Platform** ([Live Demo](#))

(Next.js, TypeScript, Tailwind CSS, Clerk, MongoDB, Google Gemini API)

- Built a **real-time AI chat application** integrating **LLM APIs** with <1.2s response latency and support for **100+ concurrent sessions**.
- Integrated **Clerk authentication** for secure user sessions and MongoDB for chat history storage.
- Implemented **Google Gemini API** for generating conversational AI responses.
- Engineered scalable backend with **MongoDB Atlas**, leveraging indexing & caching for **40% faster query performance**.
- Designed a modern, accessible UI with **shadcn/ui + Tailwind**, cutting development time by **~25%** and improving user experience scores in testing.

❖ **Voting App – Secure Online Government Election Platform** ([Live Demo](#))

(Next.js, Node.js, Express.js, MongoDB, JWT)

- Built an encrypted voting system with JWT-based authentication, ensuring **100% voter identity protection**.
- Optimized database queries, reducing ballot processing time by **~30%**.
- Simulated **500+ concurrent voting sessions** during stress testing.

❖ **Movie Browsing App – API Integrated Movie Discovery Platform** ([Github Repo](#))

(React.js, TMDB API, Context API)

- Developed a responsive web app to search and filter **500K+ movies from TMDB API**.

Integrated favorites management (localStorage + Context API), improving user engagement by **~20% in testing**.

EDUCATION

Expected in Dec'26

BS Software Engineering

CGPA: 3.70

CERTIFICATIONS

- Programming with JavaScript - **Meta**
- Advance React - **Meta**
- CCNAv7: Introduction to Networks - **Cisco**
- Getting started with Python - **Google**

ACHIEVEMENTS

- Awarded **Merit-Based Scholarship** for maintaining a **3.56 CGPA in 3rd semester**.
- Ranked among **Top 10 Software Engineering Students (Fall 2023)** out of all campuses nationwide.

Github: [@pikacoder44](#)

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