

# Shubham K. Singh

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📍 Mysuru, India

## SUMMARY

Backend-focused computer science student with strong fundamentals in developing scalable systems and machine learning. Experienced in building practical applications using Node.js, RabbitMQ, MongoDB and Docker. Seeking opportunities to deepen backend engineering skills and contribute to production-oriented systems.

## EDUCATION

### The National Institute of Engineering (NIE)

B.E. in Computer Science & Engineering | GPA: 8.9 (Current)

Aug. 2023 – Jun. 2027 (Expected)

Mysuru, India

- Courses: DBMS, OS, Networking, Machine Learning

### Kendriya Vidyalaya COD Chheoki (CBSE)

Class 12: 94.6% | Class 10: 89.4%

Apr. 2020 – Mar. 2022

Prayagraj, India

## PROJECTS

### Neuro Shield | Stroke Risk Analysis | Node.js, React, FastAPI | GitHub

- Built a **backend-first system** that returns stroke-risk predictions based on patient data using an **ML microservice**.
- Focused on clean and **modular API design** implementing **email OTP verification** for authentication.
- Integrated a simple **explainability component** showing input feature influence on predictions using LIME.
- Implemented secure **role-based access** flow for doctors and patients, storing records in Supabase.

### UTSAV | Campus Engagement Platform | React, TailwindCSS, Firebase | GitHub

- Built a **role-based portal** for college event participation and organizational ease.
- Implemented manual and **OAuth authentication** using Firebase Auth.
- Designed a responsive interface for students to browse, register, view event details, and rate events.

### Mini OCR Pipeline | Product Feature Extraction | Python, PaddleOCR, ML Workflow

- Implemented an **OCR-based script** to extract text from product images as a Amazon ML challenge.
- Performed cleanup steps like **tokenization** and structuring to convert raw OCR output into readable form.
- Compared **F1-scores** across multiple models including EasyOCR, PaddleOCR, and Tesseract for better performance.

## SKILLS

**Backend Development** : Node.js, Express.js, RabbitMQ, REST APIs, OAuth2.0, Docker

**Databases** : MongoDB, Postgres

**Languages** : JavaScript, C++, Python

**Machine Learning** : Data preprocessing, models building, OCR, model integration

**CS Fundamentals** : Data Structures, OS, DBMS, Computer Networks, OOP

**Tools** : Git, GitHub, Vercel, Postman, Winston, Zod, GenAI

## ACHIEVEMENTS

- **DSA & Problem Solving**: Solved 150+ problems across LeetCode and GeeksForGeeks.
- Real-world experience in product development for handling large number of users through open-source contributions, personal projects, and participating in global tech challenges.
- Organized learning sessions as part of **Anveshan (AIML Club)**, including ML bootcamps and tech talks.