

# Shubham Malhotra

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## Education

Bennett University (Greater Noida), B.Tech in Computer Science

Sept 2022 – July 2026

- CGPA: 8.82

## Skills

**Programming & dev:** C++, Python, TypeScript, JavaScript (ES6+), HTML5, CSS3, React.js, React Native, Node.js, Express.js, Three.js

**Cloud & DevOps:** AWS (EC2, Lambda, S3, VPC, Route 53, CloudFront, IAM, Rekognition), Netlify, GitHub Actions

**Databases & Tools:** MongoDB, MySQL, Postman, Firebase, Expo, Chart.js

**APIs & Development:** REST API Development, FastAPI, OCR Integration, RAG Pipelines, Real-Time Voice Agents

## Experience

SDE Intern - Ramai Healthcare Private Limited

Jun 2025 – Present

*Tech Stack: React Native, TypeScript, Three.js, FastAPI, Python, MongoDB, Firebase, Expo*

- Developed a **RAG pipeline** with a sliding-window summarization strategy, **reducing token consumption by 75%**.
- Built a **low-latency STS real-time voice agent** with contextual responses, supporting three modes: General, Diagnosis, and Therapist.
- Integrated **Health Connect** to aggregate user data from devices such as **Fitbit and Google Fit**, enabling unified health insights within the app.
- Implemented a **3D model** with interactive touchpoints and real-time morph animations, achieving near-zero latency.

## Projects

Product Safety Analyzer – Cloud-Based Ingredient Risk Detection Web App

PSA 

*Tools Used: React.js, Python, AWS S3, AWS Rekognition, MongoDB, ChartJS, OCR*

- Developed a web application to extract and analyze product ingredients from images, visualizing risk levels .
- Integrated AWS S3 for secure image storage and AWS Rekognition for OCR-based text extraction .
- Designed MongoDB database for ingredient metadata and safety grading, created interactive dashboards and strategized AI/ML deployment for predictive analysis, reducing ingredient risk assessment time by 30% .

TeamForge – Hackathon Discovery and Team Matching Platform

TeamForge 

*Tools Used: React.js, Firebase, Node.js, Chakra UI*

- Designed a full-stack hackathon discovery platform with AI-based team matching features .
- Implemented user authentication, personalized dashboards, and profile creation with image upload support .
- Used React.js and Firebase for authentication and backend services, and reducing deployment time by 40% .

## Research

Development-Based Classification of Satellite Imagery Using EfficientNetB0

Jan 2025 – Apr 2025

*Tools Used: Python, TensorFlow, Keras, EfficientNetB0, NWPU-RESISC45 Dataset, Matplotlib*

- Built a deep learning model using EfficientNetB0 for classifying 45 land-use categories in the RESISC45 dataset .
- Applied image augmentation, transfer learning, and fine-tuning techniques, leading to a 84.4% .
- Improved generalization using checkpoint-based optimization and early stopping, resulting in a performance gain of over 10% compared to basic CNN architectures .

## Certifications

Amazon Web Services: AWS Certified Cloud Practitioner

May 2024

Google (via Coursera): Bits and Bytes of Computer Networking

March 2024