

Utkarsh Singh

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EDUCATION

VIT Bhopal University, Bhopal, MP
B.Tech in Computer Science Core Engineering
GPA: 8.38/10

Expected May 2026

Maharshi Patanjali Vidya Mandir, Prayagraj, UP
12th CBSE: 92.4%
10th CBSE: 94.4%

June 2021

July 2019

PROJECTS

MERN Stack Authentication System
github.com/utk1725/MERN-Stack-Authentication-System

Feb 2025

- Engineered a full-stack authentication system with JWT and bcrypt, reducing unauthorized access risks by 80%.
- Structured RESTful APIs using Express.js; improved user login response time by 30%.
- Created a responsive UI in React and Tailwind CSS; achieved mobile optimization across 5+ device types.
- Integrated MongoDB for persistent user sessions; designed schema for scalable data management.
- Initiated enhancements like token refresh logic and session timeout for improved UX and security.

Chickpea Quality Grading using YOLOv7-Tiny
github.com/utk1725/Chickpea-Anomaly-

Aug 2023 – Nov 2023

- Engineered a YOLOv7-Tiny deep learning pipeline trained on 20,000+ annotated images to classify chickpeas into 7 quality grades.
- Attained 96.4% accuracy, streamlining defect identification and improving quality control by 40%.
- Devised efficient preprocessing using OpenCV and PyTorch, cutting training time by 25%.
- Integrated Roboflow API for seamless dataset management and versioning across training iterations.
- Visualized model inference on batch test images using Colab; prepared weights for edge deployment.

EXPERIENCE & EXTRACURRICULAR

Fintech Club, VIT Bhopal
Core Member – Event Management and Tech Team

Jan 2023 – Jun 2023

- Spearheaded 4 major tech events, engaging 200+ students and 5 industry speakers across 6 months.
- Co-led HackExchange with 10-member team; increased participation by 60% from previous edition.
- Cut event setup time by 30% via logistics process optimization and early vendor alignment.
- Boosted event visibility by 45% using targeted social media outreach and weekly email campaigns.
- Coordinated with design and tech teams to streamline workflows, improving turnaround time for assets by 25%.

TECHNICAL SKILLS

Programming Languages: Python, C++, JavaScript

Web Development: HTML, CSS, JavaScript, Node.js, Express.js, React.js, MongoDB, MySQL, JWT, Postman

Machine Learning & AI: Supervised/Unsupervised Learning, Object Detection, YOLO, PyTorch, TensorFlow, Scikit-learn

Computer Science Concepts: Data Structures & Algorithms, Operating Systems, Computer Networks, Database Management Systems

Tools & Platforms: Git, GitHub, VS Code, MongoDB Compass, Jupyter Notebook, Visual Studio

Development Practices: Version Control, Agile Methodology, CI/CD (Basics), Git Workflow

Soft Skills: Team leadership, project execution, technical communication

CERTIFICATIONS

- MERN Fullstack Certification** – Codemithra Ethnus, Jan – Apr 2025
- Cloud Computing** – IIT Kharagpur, Apr 2024
- IBM AI Engineering** – 6 Courses (Coursera), Dec 2023
- IBM Blockchain Developer**

SUMMARY

Computer Science undergraduate focused on building AI-based systems and scalable applications. Demonstrated ability in project delivery, collaboration, and applying modern ML and software development practices to real-world challenges.