

RITIK KUMAR KOSHTA

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
M.Tech. in Computer Science and Engineering	Indian Institute of Technology, Guwahati	7.89	2023-2025
B.Tech. in Information Technology	IET DAVV, Indore	80.40%	2019-2023
Senior Secondary	CBSE Board	85.00%	2018
Secondary	MP Board	88.50%	2016

WORK EXPERIENCE

LTIMindtree

Software Development Intern

Feb. 2023 – May 2023

- Interned at LTIMindtree in the JAVA Track of the Ignite-Training program, achieving above **90%** marks in all milestone exams and recognized as a star performer.
- Learning Outcomes:** JAVA Programming, Object-Oriented concepts, Web Development and SQL.

PROJECTS

M.Tech Project | In-Field Testing of Digital Microfluidic Biochips using MARL

Jun. 2024 – Dec. 2024

(Dr. Sukanta Bhattacharjee, Dept. of CSE, IIT Guwahati)

- Enhanced digital microfluidic biochips (DMFBs) reliability in bio-protocols using Reinforcement Learning.
- Modelled the problem from a SAT solver to an RL problem for improved scalability.
- Developed an optimal testing strategy, significantly reducing test completion time in real-life bioassay experiments.

Entry-Exit Digitization System, IIT Guwahati

Jan. 2024 - May. 2024

(Course Project, Dr. Debanga Raj Neog, Professor, DS & AI, IITG)

[Video](#) | [GitHub](#)

- Implemented a Digital Entry-Exit System with **97.5% object detection precision** for **card identification** using YOLOv5.
- Achieved **93% classification accuracy** with **CNN** and **89% face recognition reliability** for authentication.
- Integrated **PyTesseract** for **OCR** and employed **image processing** techniques for text enhancement.
- Utilized a **MySQL** database for **verification** and evaluated system performance on a cohort of **53** students under various lighting conditions.

Speech-Based Animal Name Translator

Jun. 2023 – Dec. 2023

(Course Project, Dr. Pradip Kr. Das, Professor, CSE, IITG)

[Video](#) | [GitHub](#)

- Created a child-friendly C application for translating common English animal names to Hindi, using advanced techniques like **Linear Predictive Coding** and **Hidden Markov Model**.
- Achieved **95% training accuracy** and demonstrated strong performance during **live testing** with an **accuracy** of **65-75%**.
- Tools Used:** C/C++, MS Visual C++, and Cool Edit for development and testing.

Memories - The Posting Site

Jan. 2023 - May 2023

(Self-Project, based on Web Developer Boot Camp course on Udemy)

[Video](#) | [GitHub](#)

- Developed a comprehensive **MERN stack** web application allowing users to share their travel experiences.
- Featured **user authentication**, **image uploads**, and **CRUD operations**, with the application **hosted** on Heroku and Netlify.
- Allowed users to **follow friends**, **like**, and **comment** on their pictures, enhancing social interaction within the platform.
- Implemented functionality for adding hashtags to posts and **searching posts** by hashtags or titles, improving discoverability.
- Tools Used:** MERN, HTML, CSS, JavaScript.

TECHNICAL SKILLS

- Programming Languages:** JAVA, C/C++, Python
- Web Technologies:** HTML, CSS, JavaScript, Node.js
- Database Management:** MySQL, MongoDB
- Development Tools:** VS Code, GIT
- CS & Fundamentals:** DSA, Operating System, DBMS, Computer Networks

KEY COURSES TAKEN

- Computer Science:** Image Processing with Machine Learning, Design and Analysis of Algorithms, Speech Processing, C-based VLSI, Virtual and Augmented Reality Systems, Parallel Algorithm
- Online Course:** Web Developer Boot Camp | Udemy ([Show Credentials](#))
- Online Course:** Machine Learning Specialization | Coursera

ACHIVEMENTS

- All India rank 384**, GATE CSE, Percentile **99.5956%**, Marks: **64.67**, Score: **712** Year - 2023
- LeetCode**, Solved more than **600** LeetCode problems. Visit: [ritikkoshta02](#)

EXTRACURRICULAR

- Teaching Assistant**, CSE Department, IIT Guwahati 2023 - 2025
 - CS 549 (Computer and Network Security) and CS 563 (Natural Language Processing)
 - Managed classes of **40 to 50** students, demonstrating strong **Communication** and **Leadership** skills.
- Graphic Designer**, Elevated **37%** TRPWS engagement through **Careful Analysis** and **Team Collaboration**. 2020