

# Tanmayee Tajane

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## Education

### Indiana University

Bloomington, IN

Master of Science in Computer Science

May 2025

Relevant Coursework: Software Engineering, Applied Algorithms, Product Management, Big Data Applications, Engineering Cloud Computing, Applied ML, Advanced Database Concepts, Computer Networks, and Data Mining.

### Vishwakarma Institute of Technology

Pune, India

Bachelor of Technology in Electronics and Telecommunication Engineering

May 2023

Relevant Coursework: Data Structures and Algorithms, Machine Learning, Computer Vision, Signal Processing, Embedded System Design, Computer Architecture and Operating Systems, Network Security, Project Management, Object-Oriented Programming. CGPA - 8.88/10

## Skills

- **Programming:** Python, Java, JavaScript, C++, C.
- **Web Development:** ReactJS, HTML, CSS, JSON, XML, NodeJS, PHP, Express.js, Django.
- **Databases & Cloud Technologies:** SQL, MongoDB, PostgreSQL, Kubernetes, Firebase, Hadoop, Spark, Azure, AWS, SDLC.
- **Libraries & Frameworks:** Spring, NumPy, Pandas, Matplotlib, Seaborn, sci-kit-learn, TensorFlow, OpenCV, Pickle.
- **Other tools:** Docker, Slack, Git, JIRA, Selenium Testing, REST APIs, RabbitMQ, Visual Studio, Linux.

## Work Experience

### Teaching Assistant - CSCI-B 405 Applied Algorithms — CSCI-A 290 Tools for Computing

Bloomington, IN

Luddy School of Informatics, Computing, and Engineering

August 2024 - May 2025

- Assisting the professor with the course and holding regular office hours to address questions.
- Grading assignments, quizzes, and exams, ensuring fair and timely evaluation.

### Computer Vision Research Intern

Pune, India

E&TC Department, VIT

January 2023 - May 2023

- Implemented a Computer Vision Project to improve Image Captioning with LSTM and Attention Mechanism, using architectures like VGG16, ResNet50, DenseNet, and InceptionV3 as encoders.
- Worked with the Flickr8k Dataset and collaborated effectively in a cross-functional team environment.

## Projects

### DeliverEase — ReactJS, NodeJS, Express, CSS, Docker, MongoDB, Vercel, Firebase

- Developed and led a full-stack project DeliverEase, a robust platform for seamless delivery operations, end-to-end.
- Implemented features such as order tracking, route optimization, and real-time updates for customers and delivery personnel, enhancing operational efficiency along with back-end functionality.
- Collaborated with cross-functional teams to gather requirements, design solutions, and deliver high-quality software products on schedule leveraging agile methodologies and version control through a CI/CD pipeline resulting in a 25% reduction in post-deployment bugs.

### HaltWatch: Advanced Vision Recognition for Safe Autonomous Driving — OpenCV, Numpy, Pandas, Matplotlib

- Computer Vision Project using the SIFT algorithm which gave 92% accuracy for the model.
- Created a dataset of 17920 images of hand signals from several videos of motorcycle/bicycle drivers.

### LearnQuest — PHP, SQL, Firebase

- Spearheaded the development of LearnQuest, a dynamic web application focused on educational gamification.
- Integrated Google authentication for user registration, enhancing security and convenience for users along with score tracking functionality to monitor user progress and performance.
- Leveraged SQL database management through PhpMyAdmin for efficient storage and retrieval of user data.

### Library Management System in Java — Java Swing, XAMPP, SQL

- Designed and developed a Library Management System in Java, showcasing strong Object-Oriented Programming (OOP) principles making use of Java Swing and AWT tools to create a user-friendly graphical interface for efficient library operations.
- Integrated a Database Management System to store and manage library resources, demonstrating proficiency in database handling.

## Papers Presented

- Research paper titled “Vision-based Recognition of Slow signal and Stop signal for autonomous driving” published in AIP conference proceedings. [Link](#)
- Best Paper Award for “Study of Face Recognition Algorithms” at RTAR-2021, August 2021.