Tanmayee Tajane

Bloomington, IN • Linkedin • tajanetanmayee@gmail.com • (812) 360-0948

EDUCATION

Indiana University | *Master of Science in Computer Science* **Bloomington, IN**
Relevant Coursework: Software Engineering, Applied Algorithms, Applied Machine Learning, Engineering Cloud Computing, Advanced Database Concepts, and Data Mining. Expected May 2025

Vishwakarma Institute of Technology | *Bachelor of Technology in Electronics and Telecomm. Engineering* **Pune, India**
Relevant Coursework: Data Structures and Algorithms, Machine Learning, Computer Vision, Signal Processing, Embedded System Design, Computer Architecture and Operating Systems, Network Security, Project Management, and Object Oriented Programming. May 2023
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.
• **Libraries and Frameworks:** Spring, NumPy, Pandas, Matplotlib, Seaborn, sci-kit-learn, **TensorFlow**, **OpenCV**, Pickle.
• Other tools: **Docker**, Slack, Git, JIRA, **terraform**, Selenium Testing, REST APIs, **RabbitMQ**, Visual Studio, Linux.

WORK EXPERIENCE

Associate Instructor - CSCI-B 405 Applied Algorithms **Bloomington, IN**
Luddy School of Informatics, Computing and Engineering August 2024- Present

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

Research Intern **Pune, India**
E&TC Department, VIT Jan 2023- May 2023

- Implemented a Computer Vision Project for Improving Image Captioning With LSTM and Attention Mechanism. Experimented with a combination of **VGG16**, ResNet50, DenseNet, and, InceptionV3 architectures as encoders and **LSTM** and Bi-LSTM architectures as decoders.
- Utilized Flicker8k Dataset consisting of 8000 random images with and without context.
- Worked closely with the project mentor and collaborated effectively in a 2 person 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. Integrated payment processing with Stripe.
- 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.

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 consisting 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
- Received the Best Paper Award for a research paper titled “Study of Face Recognition Algorithms” at the National Conference on RTAR-2021 organized by the Council of Industrial Training & Research held in August 2021.