

Tanuj Kenchannavar

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PROFILE

Enthusiastic AI Engineer passionate about designing scalable Internet platforms and innovative AI solutions. Proficient in Python, TensorFlow, and data pipelines, with hands-on experience in IoT analytics, cloud-based architectures, and statistical modeling. Adept at translating complex challenges into impactful results, leveraging advanced ML techniques like LLMs and RAG pipelines. Skilled in collaborative problem-solving and currently pursuing a Master's in Computer Science with a focus on cutting-edge AI technologies.

EDUCATION

- Vanderbilt University, Masters in Computer Science**
Relevant Course: Cloud Computing, Artificial Intelligence
- Aug 2024 – May 2026 | Nashville, USA
- Savitribai Phule Pune University, BE Computer Engineering**
Relevant Course: OOPS, DSA, Algorithms
- Feb 2018 – Mar 2022 | Pune, India

PROFESSIONAL EXPERIENCE

- School of Engineering at Vanderbilt, Graduate Teaching Assistant**
• **Teaching Assistant (TA)** for CS 4287 (Principles of Cloud Computing).
• **Conducted** labs, graded assignments, quizzes, and exams to help students improve their understanding and performance.
• **Held** weekly office hours to assist with projects, promoting student success
- Jan 2025 – present | Nashville, USA
- HCL Tech, Graduate Engineer Trainee**
• **Contributed** to a project to enhance fault order management, boosting validation accuracy by 30%.
• **Crafted** a dynamic website using Angular (front-end) and C# (backend), facilitating seamless data flow with Swagger documentation.
• **Architected** and **optimized** database solutions, integrating SQL for efficient data handling.
• **Earned** 'Hero of the Sprint' recognition three times for consistently delivering high-quality results within **Agile teams**.
- Aug 2022 – Jan 2024 | Pune, India

PROJECTS

- Interview-AI, (Ongoing)**
• Developing a tool for technical mock interviews using AI models.
• Integrated **KeyBERT** (fine-tuned) for **resume skills extraction**, **Whisper** for **speech-to-text**, and **Mistral 7B** for **question generation and analysis**.
• Managed project workflow and fine-tuned **KeyBERT** to improve resume parsing accuracy.
- 2025
- Cloud-Based IoT Data Analytics Pipeline, Cloud Computing**
• **Simulated** noisy IoT camera feeds using the CIFAR-10 dataset to reflect real-world conditions and test system reliability.
• **Engineered** a data analytics pipeline utilizing Apache Kafka for processing IoT-based surveillance data, enabling real-time image inference and storage across distributed virtual machines.
• **Designed** two Kafka consumers: one to store data in a database MongoDB and another to perform ML-based inference with a ResNet model served through Flask.
- 2024

PUBLICATIONS

- Autonomous Vehicle via Raspberry Pi**
• **Created** a low-cost autonomous vehicle prototype utilizing Raspberry Pi 4, Pi Camera, L298N, IR sensors, and an ultrasonic sensor for navigation.
• **Achieved** lane following using IR sensors and object detection with the ultrasonic sensor to ensure safe vehicle movement.
• **Employed** Python programming and the Haar Cascade Classifier for real-time object detection and lane tracking.
- Sep 2023
- Smart Coal Mining Helmet Using Arduino**
• **Spearheaded** the development and integration of sensors (DTH11, MQ2, LDR, GPS) into an Arduino-based smart helmet to detect hazardous conditions, ensuring miner safety.
• **Collaborated** with a team to design and validate the system using Proteus simulation, overseeing functionality testing and system architecture.
• **Implemented** an SQL database to store and analyze real-time sensor data for monitoring and reporting.
- May 2022

SKILLS

Programming skills	Database	Tools	API Documentation
Python, Angular, Typescript,OOPs	SQL, MongoDB	Jira, Git, VSCode, Pycharm, pyTorch, OpenAI	Swagger
Cloud			
Chameleon			