

**Student questionnaire for teacher letter of recommendation**

This form is for students to fill out.

Complete this form to help us write a letter of recommendation on your behalf. Keep in mind, the more specific the details you can give, the more personal and effective your recommendation will be. Don’t forget to take the time to thank your teacher! At the top of the form you’ll find a suggested thank you note to include.



**Teachers first name and last name: K Venkateswarlu  
  
Teacher’s e-mail address of the teacher :**profk.venkateswarlu@andhrauniversity.edu.in

**Teacher’s Contact number:**+91-950 20 46 171 **Teacher’s Position:Professor  
  
Subject/course by the teacher :PSQT(**Probability, Statistics, and Queuing Theory)

**Year and Semester taught by the teacher : 3rd year 2nd sem  
  
Duration since you know the teacher : From 2022 To 2025**

**Student’s first and last name: Tarun Tej Saka**

**List the name of the course(s), and mention the semester and the year you took with this teacher:   
PSQT ,3rd year 2nd sem in 2023**

**List three adjectives you would use to describe yourself:**

**Curious,Analytical,Driven**

**Describe a lesson you took with this teacher you enjoyed and why:**

**(250 words)**

One lesson that stands out for me in the **PSQT** subject, taught by **Professor K. Venkateswarlu**, was during our study of **Queuing Theory**—specifically, the concept of **M/M/1 Queues** and how they apply to real-world systems. I particularly enjoyed this lesson because Professor Venkateswarlu made a complex topic engaging by illustrating the concepts with real-life examples and practical scenarios.

In class, we studied how queuing models are used to analyze the behavior of waiting lines, such as those in banks, telecommunications, or even computer networks. Professor Venkateswarlu demonstrated this by using an example of customers waiting at a service counter, allowing us to visualize how mathematical models can help optimize service efficiency. He took time to explain the underlying assumptions of the M/M/1 model—Markovian arrival process, exponential service time, and single-server—before guiding us through the calculation of key metrics like average wait time and system utilization.

What I enjoyed most was how he connected theoretical learning to real-world applications, helping me see how these mathematical models impact industries and improve system design. He also encouraged us to work on small group exercises that enabled us to apply the formulas and derive insights on our own. His teaching approach, which combined theory with practical applications and interactive learning, made the lesson enjoyable and easy to grasp.

This lesson not only deepened my understanding of queuing theory but also sparked my interest in how mathematical modeling can solve everyday operational problems.

**Describe a project you worked on with this teacher in the class that you are proud of: (250 words)**

One project I am particularly proud of is “Bone Tumor and Fracture Detection Using Deep Learning,” which I worked on under the guidance of **Professor K. Venkateswarlu** as part of my final year capstone. The objective of this project was to create an intelligent diagnostic system capable of identifying bone fractures and tumors from X-ray images using advanced machine learning and computer vision techniques.

With Professor Venkateswarlu's expert mentorship, our team implemented a deep learning pipeline that utilized Convolutional Neural Networks (CNNs) and the YOLOv11 architecture for object detection and classification. We also built a Streamlit-based web interface for seamless user interaction, and integrated a database system for user management and report storage—making the tool practical for real-world medical applications.

Professor Venkateswarlu played a critical role in guiding us through the technical and research phases. His feedback helped us refine our model, pay closer attention to data preprocessing, and ensure ethical AI practices, especially considering the sensitivity of medical data. His insights greatly enhanced our understanding of not only how these systems are built, but also how they should be responsibly deployed.

This project gave me hands-on experience with AI in healthcare and deepened my passion for machine learning and its potential to solve meaningful problems. It affirmed my desire to pursue further studies in Data Science and develop intelligent systems that contribute positively to society.

**What is something your teacher probably doesn’t know about you?  
(200 words)**Something my teacher, Professor K. Venkateswarlu, probably doesn’t know about me is how deeply this project shaped my personal and professional aspirations beyond the classroom. While I always showed interest in our coursework and stayed engaged during project discussions, what he may not have seen is the number of hours I spent outside class learning, experimenting, and building on the concepts we discussed—driven purely by curiosity and passion.

After our initial exposure to deep learning through the bone tumor detection project, I spent my weekends and nights exploring additional topics like neural network optimization, ethical AI, and deployment of ML models. I even started building small AI-powered web applications to strengthen my understanding of real-world use cases. This self-motivation wasn't just about doing well academically—it was about discovering a purpose. I realized I want to use AI to make people’s lives better, especially in fields like healthcare and education.

This project under his mentorship didn’t just help me complete my degree—it helped me find direction. And while I may not have openly expressed it during the semester, this experience was a turning point that continues to drive my ambitions today.

**Below is a list of attributes colleges consider when evaluating your application. Select 1 or 2 of these attributes and share an example of a time you demonstrated these characteristics in class. (250 words)**

Two attributes that I believe best represent me as a student are **problem-solving ability** and **collaboration**—both of which I demonstrated during our capstone project on Bone Tumor and Fracture Detection Using Deep Learning.

During the early phases of the project, our team encountered significant challenges in handling inconsistent and noisy medical image datasets. The pre-trained models were not yielding reliable results, and the accuracy was far below expectations. Instead of relying solely on standard solutions, I took the initiative to study image preprocessing techniques and explored augmentation methods that could help improve model generalization. After multiple experiments and validations, I proposed a modified pipeline that significantly improved the detection performance, helping us move forward with confidence.

At the same time, this project demanded consistent collaboration within our team. We divided tasks, regularly synced up, and resolved technical roadblocks together. I actively contributed not only to the model development but also helped team members understand deep learning concepts they were less familiar with. I made sure that everyone’s input was heard and valued, which made our team more cohesive and productive.

This experience reaffirmed my belief in the power of teamwork and creative problem-solving—skills I look forward to further developing and applying during my graduate studies.

**Additional information.**

Use this space to share any additional information with your teacher. Is there anything not already stated that you want to make sure they know prior to writing your letter of recommendation?

**Thank you for taking the time to share this important information with your teacher!**