

# KOLASANI GAYATRI

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## CAREER OVERVIEW

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Engineered a personalized career guidance system utilizing TF-IDF, KNN, and XGBoost, delivering over 500 career recommendations with an 80% user satisfaction rating based on feedback surveys. Optimized data preprocessing pipelines and deployed machine learning models on cloud infrastructure, achieving a 15% improvement in prediction accuracy and a 20% reduction in model training time.

## EDUCATIONAL CURRICULUM

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### BTECH CSE-AI

2021 – 2025

KKR & KSR Institute of Technology and Sciences Guntur, India  
CGPA 7.6

### Higher Secondary Education

2019 – 2021

Loyola Public School, Guntur, India  
Percentage 89%

### SSC

2018 – 2019

Loyola Public School, Guntur, India  
percentage 78%

## PROJECTS

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### AI POWERED CAREER PATHWAY GUIDANCE FOR PERSONALIZATION

*Tools & Technologies: Python, Scikit-learn, TF-IDF Vectorization, K-Nearest Neighbors (KNN), XGBoost, Machine Learning (ML), Artificial Intelligence (AI), Data Preprocessing*

- Built an AI-driven career guidance system to provide personalized career recommendations using TF-IDF vectorization, K-Nearest Neighbors, and XGBoost.
- Streamlined user input processing through vectorization methods such as TF-IDF and Word2Vec, boosting feature extraction speed by 30% and reducing data noise.
- Implemented XGBoost model for ranking career pathways, improving prediction accuracy by 20% and streamlining career recommendations for users based on profile data.
- Conducted skill gap analysis and suggested personalized courses, tools, and certifications to improve employability.
- Incorporated user feedback loops into the recommendation pipeline using supervised learning techniques, enabling continuous model refinement and improving recommendation relevance by 20%.
- Evaluated system accuracy using Cohen's Kappa, ensuring relevance between user profiles and recommended paths.

### AUTOMATED SHOPPING TROLLEY

- Developed an autonomous robot trolley using ROS in a 36-hour hackathon at our college.
- The robot facilitates goods transportation across industries like warehousing, healthcare, and retail. Enhanced situational awareness with 3D visualization & simulation.
- Integrated Python, reducing execution errors by 60%, improving deployment
- Led a team of six, optimizing project efficiency and outcomes.

## PUBLICATIONS

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### AI-Powered Career Pathway Guidance for Personalization

Presented at the National Conference on Innovative Challenges in Deep Learning and its Applications (NCICDLA-25)

Developed an AI system that offers personalized career suggestions by analyzing user profiles and real-time job market trends, helping students make informed career decisions.

## SKILLS

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**Programming Languages:** Python,SQL

**Developer Tool:** Jupyter Notebook,Visual Studio Code

**Concepts:** Machine Learning,OOPs,

## CERTIFICATIONS

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**Great Learning** - Python Programming

## CO-CURRICULAR ACTIVITIES

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- Participated in a 36-hour national-level robotics hackathon, where I co-developed an autonomous shopping trolley using ROS and Python, achieving 60% error reduction through system optimization and real-time simulation.
- Presented an AI-driven Career Guidance System at NCICDLA-25, showcasing a machine learning model trained on real-world datasets with 80% user satisfaction.

## EXTRA-CURRICULAR ACTIVITIES

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**KITS YUVA:** Technical Organizer