# JAYAKRISHNA KONDA

[My Portfolio Website](#)

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## SUMMARY

Graduate student in Data Science at UMBC (3.9 GPA) with 1 and half year experience as a Data Analyst at Tata Consultancy Services (TCS). Currently an AI/ML Programming Intern at R/SEEK, employed to make machine learning models to the RC car navigation. Strong foundation in machine learning, LLMs, big data processing, and backend development. Interested in developing AI systems that are scalable and telling stories with data through visual means.

## EDUCATION

**UNIVERSITY OF MARYLAND BALTIMORE COUNTY (UMBC)**                                      **Baltimore, Maryland**

*Master of Professional Studies; Major in Data Science*                                     **Aug 2023 - May 2025**

- GPA: 3.90/4.00
- Coursework: Machine Learning, Practical Deep Learning, Big Data Processing, Ethical Issues in Data Science.

**OSMANIA UNIVERSITY (OU)**                                                          **Hyderabad, India**

*Master of Arts; Major in Mass Communication*                                          **Aug 2021 - Oct 2022**

- GPA: 7.22/10.00
- Coursework: Public Relations, Corporate & Organizational Communication, Communication Research Methods.

**SREENIDHI INSTITUTE OF SCIENCE & TECHNOLOGY (SNIST)**                               **Hyderabad, India**

*Bachelor of Technology; Major in Computer Science & Engineering*                       **May 2015 - May 2019**

- GPA: 8.82/10.00
- Coursework: Data Structures, Database Management Systems, Python Programming, Cloud Computing, Operating Systems, Data Warehousing and Data Mining, Big Data Analytics.

## PROFESSIONAL EXPERIENCE

**AI/ML Programming Intern | AI/ML Intern at R/SEEK**                                      **Feb 2025- Present**

- Built object recognition and motion tracking systems for RC cars to assist children with dystonia.
- Achieved 95% accuracy using YOLOv8, converted models to TensorFlow Lite for deployment on Espressif (ESP32) devices.
- Collaborated with fellow engineers and other stakeholders for improved usability and reliability.

**Assistant Systems Engineer – Data Analyst| Data Analyst at Tata Consultancy Services**       **Mar 2022- Jun 2023**

- Collaborated with client Littelfuse Inc. to analyze incident trends and perform root-cause analysis using historical support data.
- Automated incident classification and resolution tracking using dashboards and SQL-based data pipelines.
- Reduced customer-reported bugs by 30% through proactive insights and visualization of recurring issues.
- Coordinated with cross-functional teams to streamline support workflows and increase reporting efficiency using data-driven insights.

**Software Intern | Software Intern at Infosys**                                           **Jan 2019- May 2019**

- Completed foundational training in full-stack development with emphasis on data-driven applications using Node.js, MongoDB, and XML.
- Developed a real-time movie database application, integrating external APIs and designing MongoDB schemas for efficient data storage and retrieval.
- Applied basic data analysis techniques to evaluate user interactions and movie rating patterns.
- Gained early exposure to data processing, backend development, and API-driven analytics in dynamic web environments.

## TECHNICAL SKILLS

- **Programming Languages:** Python, Javascript, Bash
- **Databases:** SQL (MySQL, Oracle, PL/SQL), NoSQL (Mongo DB)
- **Big Data Processing:** PySpark, Databricks
- **Tools & Platforms:** Azure, Git, Postman
- **Analytics & Visualizations:** Power BI, Python libraries (pandas, NumPy, matplotlib, seaborn, plotly)
- **Knowledge:** Algorithms, Data Structures, Object-Oriented Design Patterns
- **Machine learning & AI:** Supervised/ Unsupervised Learning, Dimensionality Reduction with libraries like scikit-learn, Tensorflow, PyTorch, XGBoost, Streamlit.
- **Generative AI & LLMs:** Hugging Face Transformers, Ollama (Local LLMs), LangChain, Retrieval Augmented Generation (RAG), Natural Language Processing (NLP) and custom chatbots.

## PROJECTS [Link: https://github.com/jay739?tab=repositories]

### YouTube Data Analytics
- Created a GUI-based tool for CSV ingestion and visualization using Python and Tkinter.
- Automated report generation from Kaggle YouTube dataset with just one click.

### Financial Crisis Analysis Tool
- Used FinBERT to analyze sentiment in financial news.
- Ran Monte Carlo simulations using yfinance to assess investment performance and sector risk.

### Forest Fire Detection Using SEN2 Imagery
- Developed a CNN-based wildfire detection model achieving 91% accuracy and 88% F1-score on unseen satellite imagery (Sentinel-2 + MODIS labels).
- Processed over 2,400+ multispectral image patches using NDVI and NBR indices to detect fire-affected zones with high spatial precision.
- Applied attention layers, dropout, and focal loss to improve performance under class imbalance (fire vs. non-fire).
- Planned future deployment via Hugging Face for real-time API-based detection and exploring Vision Transformers to enhance global context awareness.

### CAPM-Based Stock Analysis
- Conducted multi-metric financial analysis using the Capital Asset Pricing Model (CAPM) for Apple, Microsoft and other stocks.
- Calculated alpha, beta, and performance ratios like Sharpe and Treynor, and interpreted risk-return tradeoffs using real stock data.
- Performed data cleaning, statistical analysis, and visualizations in Python to evaluate portfolio viability.

### RAG-powered Podcast Generator (Capstone)
- Designing an AI-generated podcast engine that converts book PDFs into character-voiced audio.
- Uses OCR, NLP, character identification, and TTS models for multi-voice narration.
- Plans to integrate LangChain, Ollama (for local LLMs), and deploy with a desktop app interface via Electron.

## VOLUNTEER EXPERIENCE

### Technical and Design Head at Emerging Computers Arena (ECA SNIST)
- Designed college fest website and posters using the tools and technologies like Adobe Illustrator, Bootstrap and HTML.
- Public Speaker in the Tech Series conducted spoke about Emergence of Data Storage technologies.