

**JAMPANA VENKATA ARJUN VARMA**  
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## **OBJECTIVE**

Passionate about advancing my career in the domain of Artificial Intelligence and Machine Learning (AIML). Eager to apply my knowledge and skills in solving real-world problems while working in a challenging and dynamic environment. I am keen to contribute to innovative projects in the AIML space, leveraging my expertise in data science, machine learning, and deep learning to drive impactful solutions.

## **EDUCATION**

### **Bachelor of Technology in Computer Science and Engineering (Spl in Artificial Intelligence and Machine Learning)**

Presidency University (AICTE & UGC Board), Bangalore

August 2021 - July 2025

CGPA: 7.9 / 10

### **12<sup>th</sup> Grade (PCMC)**

Nagarjuna Vidyaniketan,

CBSE Board

Bangalore, Karnataka

March 2020 - May 2021

Marks 77% / 100%

### **10<sup>th</sup> Grade**

Nagarjuna Vidyaniketan

CBSE Board

Bangalore, Karnataka

March 2018 - May 2019

Marks 74% / 100%

## **RELEVANT COURSES**

Artificial Intelligence and Machine Learning, Applied Artificial Intelligence, Applied Machine Learning, Deep Learning Techniques, Applied Data Science, Data Analysis and Visualization, Neural Networks and Fuzzy Logic, Digital Image Processing, Design and Analysis of Algorithms, Human Computer Interaction, Operating Systems, Theory of Computation, Fundamentals of Data Analytics, Database Management Systems, Fundamentals of Natural Language Processing.

## **RELEVANT PROJECTS**

### **Deep Learning based peripheral controller**

**June 2024**

#### **Summary:**

This project involves a virtual keyboard displayed on a screen that users can operate using hand gestures detected by the MediaPipe library. By hovering their index finger over the keys, users can type, delete characters, and use special keys like Caps Lock, Enter, Space, and Delete. Additionally, hand gestures can control the mouse cursor. The system includes memory profiling to monitor usage over time. To start using the virtual keyboard, users simply run the main script and can exit the program by pressing the 'ESC' key.

### **Query-based Article Summarization and Evaluation System**

**April 2024**

**Summary:**

This project aims to develop a language processing model capable of filtering and summarizing articles based on user queries or abstracts. The system utilizes a web scraping API to fetch relevant articles from the internet corresponding to the user's input. A basic keyword-based summarization approach is employed to generate concise summaries for each retrieved article. Additionally, the project includes an evaluation component that calculates BLEU and METEOR scores to assess the quality of the generated summaries in comparison to the user's input.

**Haze and Smoke Removal for Enhanced Image Clarity using Guided Filters**

**March 2024**

**Summary:**

This project aims to enhance visibility in images affected by haze and smoke through a series of image processing steps. It employs a haze removal algorithm that first computes the dark channel prior, estimates the atmospheric light, calculates the transmission map using a guided filter approach, and finally reconstructs the haze-free image. The process involves local minima computation for dark channel, statistical analysis for atmospheric light, and iterative filtering to refine transmission estimates.

**Detection of Plastic content in rivers using Computer Vision**

**October 2023**

**Summary:**

This project leverages the YOLO (You Only Look Once) object detection model to identify objects within images stored in a specified directory. The model is fine-tuned using a pre-trained YOLO model and performs predictions on the test images, saving the results. Additionally, the project extracts GPS metadata from each image file, if available, and converts these GPS coordinates into decimal format. A Google Maps URL is then generated for each image based on its GPS coordinates, facilitating the visualization of the locations where the images were taken.

**Comparing the compressive strength of concrete mixtures using different kinds of machine learning algorithms and evaluation metrics**

**July 2023**

**Summary:**

This project uses diverse machine learning algorithms to predict and compare concrete mixture compressive strengths. It starts with dataset collection, preprocessing, and feature engineering, followed by model training and rigorous evaluation using MAE, MSE, RMSE, and R2. The goal is to pinpoint the best-performing algorithm, offering valuable insights for the construction industry.

**Experience**

**Open-Source Contributor [GirlScript Summer of Code, Remote] May 2024 – August 2024**

As a contributor to GSSoC'24, I am collaborating with a diverse group of developers on impactful open-source projects. My role includes coding, debugging, and improving software, all while learning and applying best development practices. This experience is enhancing my technical skills, broadening my professional network, and deepening my understanding of teamwork and open-source contributions.

**TECHNICAL SKILLS**

AI and Machine Learning, Database Management, Data Visualization, Data Science & Analytics, Web Development, Software Development, Big Data Technologies

**PROGRAMMING SKILLS**

Python, JavaScript, Java, C#, R, HTML, CSS, SQL

**SOFT SKILLS**

Communication Skills, Project Management, Problem-Solving Skills, Critical Thinking, Teamwork and Collaboration, Time Management, Adaptability, Creativity, Attention to Detail

**CERTIFICATIONS**

- Advanced: Generative AI for Developers Learning Path, August 2024
- Intermediate: Gemini for Google Cloud Learning Path, August 2024
- Beginner: Introduction to Generative AI Learning Path, August 2024
- Generative AI for Beginners, Great Learning, July 2024
- Data Visualization with Power BI, Great Learning, July 2024
- Introduction to Generative AI, Google Cloud Skills Boost, July 2024
- Data Processing and Visualization, MATLAB Coding, May 2023
- Machine Learning, Simplilearn, November 2022

**ACTIVITIES AND ACHIEVEMENTS:**

- Secured 2nd place in Smart India Hackathon (Internal), Presidency University, September 2023.
- Ranked in top 10 Teams for ISARC 2023 Hackathon, IIT Madras Research Park, July 2023.
- Qualified for In-Campus Hackathon (Top 30) at Nitte Meenakshi Institute of Technology, Bengaluru.
- Guided 3 groups of junior students in their Arduino Projects using Embedded C and helped them reach top 80 projects out of 500, Presidency University, April 2023.
- Top 80 projects out of 500 at Presidency University in 3rd Sem, Innovation Projects, Presidency University, January 2023.
- Won 3rd place (10,000 INR) in a Hackathon on Computer Vision, IIT Madras Research Park, December 2022.
- Participated and volunteered in various events conducted by Build Club at presidency Universities such as Hackathons, Maze runner, Full throttle and other tech events.

**CONFERENCES ATTENDED:**

5-Day International Conference – ISARC July 3-8th 2023, IIT Madras Research Park Attended a 5-day conference at ISARC 2023, participating in a hackathon, workshops, and networking sessions. Engaged with industry experts to expand knowledge in automation and robotics in construction.