

## VENKAT KUMAR R

TAMIL NADU, INDIA

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### EDUCATION

Year	Degree	Institute	Percentage / CGPA
2023-2025	M.Tech. in AI&ML	BITS-pilani(Work integrated learning programs)	-
2020	B.E. in Electronics and Communication Engineering	SACS M.A.V.M.M. Engineering College, Madurai, Tamil Nadu, India (Anna University)	CGPA = 8.23 / 10
2016	HSC (12 <sup>th</sup> ) In Computer Science	M. M. M. Higher Secondary School, Madurai, Tamil Nadu, India (State Board)	81.75 %
2014	SSLC (10 <sup>th</sup> )	M. M. M. Higher Secondary School, Madurai, Tamil Nadu, India (State Board)	89.9%

### PROFESSIONAL EXPERIENCE

AugRay PVT LTD: Machine Learning Engineer

September 2022 - Present

#### Projects :

##### 1. Ball fault identification

During this time, I used Jetson AGX to achieve real-time Ball fault detection with GUI interface and achieved 90 percent accuracy ( supervised manner).

##### 2. Images to 3D Model with texture

During this time, I was working on Photogrammetry in traditional opencv and Nerf based algorithms used to create the 3d object with texture.

##### 3. Wall segmentation

During this time, I worked on wall segmentation using a deep learning algorithm and various color schemes.

##### 4. AI Jersey

During this time, I worked on the prompt based jersey generation project.

Additionally, I created a POC for **Flyer generation and Face Texture Generation**.

CRICKETRONICS: Machine Learning Engineer Intern

June - August 2022

#### Projects:

##### 1. Ball defect identification using Jetson Nano (Classification Problem)

During this time, I used Jetson nano to achieve real-time ball defect recognition (in a supervised manner).

##### 2. Football team and player count (Tracking)

During this time, I worked on football team detection and tracking, then counted the number of players in each frame with yoloV5.

## TECHNICAL SKILLS

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- **Programming Languages: Python**
- **Software Packages: Python** ( OpenCV, TensorFlow, PyTorch, FastAI, PytorchLighting), WebScraping (BeautifulSoup, Selenium, UiPath), Docker, FastAPI
- **Cloud: AWS (S3, Machine learning), GCP**
- **Database: MongoDB**
- **Hardware: Nvidia AGX, Jetson Nano, Raspberry Pi, NodeMCU, Arduino**
- **Platforms: Mac, Linux & Windows**

## MAJOR PROJECTS

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- **PDF based chatbot using streamlit** **June 2023**
- **Attendance system using Jetson AGX** **April 2023**
- **Diabetics Retinopathy detection using streamlit (Image classification problem)** **January 2023**
- **Kaggle competition** **August 2021 – Present**
  - **Tabular Data** - 30 days MI (Achieved **Top 11%**), Song Popularity Prediction (Top 30%)
  - **Audio Data (Signal Processing)** - Music Classification (Top 40%), BirdCLEF2022 (Top 53 %\*)
  - **Text Data (NLP)** - U.S. Patent Phrase to Phrase Matching (Top 52 %\*)
  - **Image Data (Computer vision)** **June 2021**
    - **FOOD VISION BIG** (Binary & Multiclass): I have done in supervised manner using CNN (Tensor flow)
    - **Pose Estimation:** (<https://www.kaggle.com/datasets/venkatkumar001/yoga-3pose-estimation>)

Additionally, I am a secure **kaggle notebook master, kaggle discussion, and dataset expert.**

- **Implementation of PCB Layout using CNC Machine Controlling with Wireless Communication (B.E. project)** **May 2020**  
**Journal publish:** <https://irjiet.com/Volume-4/Issue-3-March-2020/Implementation-of-PCB-Layout-using-CNC-Machine-Controlling-with-Wireless-Communication/191>

## RELEVANT COURSEWORK

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- **Nvidia Jetson Specialist Certification** **May 2023**
  - **Github:** <https://github.com/VK-Ant/AttendanceSystem-JetsonAGX>
  - **Youtube:** <https://youtu.be/U-ad6ysXtD0>
  - **Blog:** [https://medium.com/@VK\\_Venkatkumar/face-based-attendance-system-using-nvidia-jetson-agx-xavier-device-c2502ed195d8](https://medium.com/@VK_Venkatkumar/face-based-attendance-system-using-nvidia-jetson-agx-xavier-device-c2502ed195d8)
  - **Fundamental course:** <https://courses.nvidia.com/certificates/7094053b5090496fa3da16cd94f78564>
- “Computational photography”, “First principle of computer vision”, “Fundamental of Reinforcement learning”, “DeepLearning and NLP”, “The Data Science Course 2021: Complete Data Science Bootcamp”, “Computer Vision”, “Introduction of Machine Learning”, “DeepLearning.AI Tensorflow Developer”, “Tensorflow Developer Certificate in 2021:ZTM”, “Learn C++ Programming Beginner to Advance – Deep Dive in C++”, “Matlab”, “AWS certify with Machine learning” **(2020-present)**