

# Pusthakala Dharan Tej

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## EDUCATION

**Keshav Memorial Institute of Technology, (JNTUH)**

*Bachelor of Technology (B.Tech.)*

*Computer Science and Engineering*

Hyderabad

2019-2023

**GPA: 8/10**

## WORK EXPERIENCE

**Defence Research & Development Organisation (DRDO), Research Centre Imarat (RCI), India**

**Software Engineer Intern**

**May'23 – Present**

- **Altair Embed** - Model Based Software Development
- **LDRA** - Ensured that code for embedded systems follows strict standards (MISRA) and check how data and control flow. Additionally, I conduct unit testing and automatically create test cases to test the system's behaviour.
- **Xilinx SDK** - Created an application, configured the hardware using the provided Board Support Package (BSP), and utilised the Hardware Description File (HDF) to define the hardware structure.
- **ZynqSoC Testing** - Testing the functionality and performance of the ZynqSoC (System on Chip) configuration.

**TEKsystems Global Services**

**Data Engineering – Data Insights Intern**

**Feb'23 – May'23**

*Training and Optimising Machine Learning Models on GCP for Natality Dataset*

- **Data Prep** - Preparing the Natality dataset for analysis and model training.
- **Big Query Analysis** - Analysing the dataset using Google BigQuery to extract insights.
- **VPC Networks** - Setting up Virtual Private Cloud networks for secure data handling.
- **GCS** - Storing and managing data using Google Cloud Storage.
- **Data Proc** - Utilising Google Cloud Dataproc for processing large-scale data.
- **Big Query ML** - Creating machine learning models within BigQuery for predictive analysis.
- **Looker** - Utilising Looker for data visualisation and exploration.
- **Tableau** - Employing Tableau for creating interactive visualisations based on the analysis results.

## PROJECTS

**Low Light Image Enhancement** - Developed a Convolutional Neural Network system for enhancing low-light images, improving object detection and scene understanding, while preserving original image content.

***Future Scope:*** Expanding from the developed CNN system for low-light image enhancement and object detection, its integration into video processing holds promise for real-time improvements in low-light video quality, enhanced object recognition, and broader applications in fields such as surveillance and autonomous vehicles.

**Water Quality Analysis using ANN** - This Flask application is designed to Accurately Predict the Potability of the given sample of water with 98% accuracy with the help of Deep Learning Model (Artificial Neural Networks).

**Crop Type Prediction using Machine Learning** - Provides information to cultivate the best food crop based on Soil type, Temperature, Humidity and Rainfall in that area.

**Pi-NAS** - A Raspberry-Pi based Network Attached Storage which makes wireless file transfers easier across your home network using OMV (Open Media Vault based on Debian Linux).

## COURSES & CERTIFICATES

**The Joy of Computing using Python, NPTEL**

**Data Science for Engineers, NPTEL**

**Deep Learning, NPTEL**

**Social Networks, NPTEL**

## SKILLS

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**Languages:** Python, C, C++, Java

**Tools/Framework:** NumPy, Pandas, GitHub

**General:** Data Structures, Algorithms, Machine Learning, Internet of Things (IoT), Linux, GCP, AWS

## EXTRACURRICULAR

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- Achieved a perfect score (30/30) in the Australian National Chemistry Quiz (ANCQ) conducted by the Royal Australian Chemical Institute (RACI) in 2016, earning a Certificate of Class Excellence and ranking within the Top 50 students across India.

- Additionally, secured a high percentile score of 96% in a National Level E-Quiz on Chemistry, organised by the Department of Physical Sciences, Kakatiya Institute of Technology and Science, Warangal in June 2020.

- YouTuber - Content Creation on YouTube for Education and Gaming

**Delta Edusmith** (1.43K Subscribers)

**Delta Gamesmith**

- Served as a Video Editing Head for KMIT's Drama Club 'Abhinaya'

**Abhinaya The Drama Club**.

- Contributed to the 'Traces of Lenses' Photography Club, and write content as a Blogger.