



# PAVAN M G


## SOFTWARE ENGINEER

### CONTACT

 (+91) 9483 875 897

 pavanmggp@gmail.com

 pavan-mg.in

 Hitech City, Hyderabad, India - 500081

### SKILLS

**Interests:** Data Structures and Algorithms, Deep Learning, Computer Vision, OS, Embedded Systems, and Mathematical Modelling.

**Languages:** C/C++, Python, Perl, Bash, CMM, HTML, CSS, JavaScript.

**Tools:** JTAG/TRACE32, Perforce, Git, MATLAB, MS Office, VS Code.

**Frameworks:** Keras, TensorFlow, OpenCV, Tkinter, NumPy.

### EDUCATION

**B.Tech - Electrical Engineering** 2021  
**Indian Institute of Technology, Varanasi**  
Grade: 8.31

**Academic Courses:** AI, Applied Deep Learning, Natural Language Processing, Parallel Computing, Data Structures and Algorithms, C Programming, Probability and Statistics, Calculus, Numerical Techniques, Digital Electronics, etc.

**XII Std - PUE, Karnataka** 2017  
**FIITJEE P U College, Bengaluru**  
Percentage: 85.17

**Academic Courses:** Computer Science, Mathematics, Physics and Chemistry.

**X Std - KSEEB, Karnataka** 2015  
**Abhinava Bharathi High School, Mandya**  
Percentage: 97.92 - School Rank 1

### CERTIFICATION

**Coursera:** Data Structures and Algorithms Specialization by UC San Deigo. Deep Learning Specialization by Deep Learning AI. Machine Learning by Stanford University.

**Hackerrank:** Problem Solving, C++ and Python.

### PROFILES

Linkedin • Github • Hackerrank • Leetcode

### LANGUAGES

English, Kannada and Hindi

### WORK EXPERIENCE

#### Qualcomm India Private Limited, Hyderabad

**Software Engineer - DDR Systems**

OCT 2022 - PRESENT

**Associate Software Engineer - DDR Systems**

MAY 2021 - OCT 2022

- Involved in **Silicon Bring-up, Sub-system Initialization, and Enablement of DDR System features** for Snapdragon chipsets across various platforms, such as mobile, modem, and base station.
- Developed drivers at Secondary Boot Loader (XBL)** to integrate DDR System Firmware, and enable DDR Training Data restore.
- Developed Full-Stack Tool and drivers to run Debug tests** at the XBL Level to validate the Health of the DRAM Part used in Flash-less Chipsets and Chipsets with NAND, EMMC, and UFS Flash Storage.
- Involved in **fine-tuning the CNN-based model** that classifies DDR Eye Health.
- Resolved System-level issues by working in collaboration** with various teams like DDR PHY, DDR SVE, ICB, NoC, etc.

**Tech Stack:** C/C++, Python, LPDDR, Bash, JTAG, Debugging, DS and Algorithms

**Interim Engineering Intern**

MAY 2020 - AUG 2020

*DDR Eye Health Classifier Tool Development*

- Built **Algorithms** to map the relation of Vref and CDC of DDR PHY into 2D Array Data called DDR Eye Plot for enabled DDR Frequencies and Read/Write operations on DDR Sub-System of a referenced Chipset.
- Generated **Synthetic data** that mimicked the Eye Plot data from scratch to get Eye Plot samples of Specific Classes from it.
- Developed a **Multiclass Learning Model** using CNN from the data generated, and built a framework for getting the summary of belonging class and feature parameters of Eye Plot on Test oCs.
- Received a **Pre-Placement Offer**.

**Tech Stack:** Deep Learning, Keras, CNN, Image Processing.

### FEATURED PROJECTS

**Fully functional Self-driving Car Simulation.**

JAN 2020 - DEC 2020

*B.Tech Thesis Project. Advisor: Prof Shyam Kamal, EEE, IIT (BHU), Varanasi.*

- Used Computer Vision techniques like **Hough Transform** via **OpenCV** to **identify lane lines**, and **CNN model** to **identify various traffic signs**.
- Trained CNN** via **behavioral cloning** techniques to **predict the driving steering angle** via image data from left, middle, and front-mounted cameras.
- Built a **fully functional model** to Self-Drive the Simulator car.

**Modelling and simulation of photovoltaic cell**

FEB 2019 - APR 2019

*Exploratory Project. Advisor: Prof V N Lal, EEE, IIT (BHU), Varanasi.*

- Used, **Simulink** programming environment (MATLAB) to implement the Electrical modeling of PV cells.
- Developed, **Mathematical modeling** of IV characteristics in the form of continuous piecewise functions using **regression**.

**Other Projects:**

Assembling Genomes Using de Bruijn Graphs. Short-Term Load Forecasting using LSTM Networks. Brain Tumor Detection using Genetic Algorithms.

### ACHIEVEMENTS & AWARDS

- Awarded **Qualcomm Orion Award** by Senior Director, for contribution to Core BSP Organization in 2022 and 2023.
- Secured, **All India Ranking of 3,192 in JEE Advanced 2017 (99.7 Percentile)**, among 2.2 lakh selected applicants from 1.2 million.
- Awarded Certificate of Merit - **Rank 15 in Karnataka Regional Mathematical Olympiad 2016**. Among the top 700 in the Country to qualify for Indian National Mathematical Olympiad, by HBCSE.
- Secured State **Rank 18 in the National Talent Search Examination (Stage 1)** by DSERT, Karnataka in 2015 (out of 70,000).

### EXTRA-CURRICULAR ACTIVITIES

- 2 Gold, 3 Silver, and 7 Bronze medals** in **Aquatics Inter college** events during 2018 and 2019.
- Represented Mandya District in Karnataka State Level **Swimming and Chess** Competition 2011, 2012, 2013, and 2014.