YASH GARG

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EDUCATION

Dr. B.R. Ambedkar National Institute of Technology — Jalandhar, Punjab, India
Masters of Technology – Computer Science Engineering; **CGPA: 8.52** (till 2nd sem) — 2024 – Present

Jaypee University of Information Technology — Solan, Himachal Pradesh, India
Bachelor of Technology – Computer Science Engineering; **CGPA: 8.7** — 2020 – 2024

K.L. International School — Meerut, Uttar Pradesh, India
CBSE – Class XII– **89.4%** ; Class X – **91.6%** — 2018 - 2020

TECHNICAL SKILLS

Languages: C, C++
Coursework: Data Structures and Algorithms, Object Oriented Programming, Operating Systems, Machine Learning

WORK EXPERIENCE

Benthon Labs Pvt. Ltd | Web Developer Intern — Jun 2023 – Aug 2023

- Worked a **Biometric Machine Integration software project**, resulting in increase in accuracy of employee attendance records and saving time in administrative tasks.
- Collaborated with team to build a software using **React** and **MongoDB** used for database management.
- Engaged in team discussions and problem-solving sessions, improving collaboration and communication skills in a professional work environment.

PROJECTS

SPAM EMAIL CLASSIFIER (C++ , MACHINE LEARNING**) | LINK**

- Developed a **spam email detection system** using **Naïve Bayes Classifier** in C++..
- Processed **4,600+ emails** from the **UCI Spambase dataset** to train the model.
- Computed **Confusion Matrix, Precision, Recall, and F1-score** to evaluate model performance.
- Achieved **78.3% accuracy**, with a **precision of 76.62%** and **recall of 81.60%**.
- Implemented **logarithmic probability calculations** to handle numerical underflow.
- Benchmarked model performance on **Weka (80% accuracy),** validating results against my implementation.

LANE DETECTION FOR SELF DRIVING CARS | LINK

- Developed a **real-time lane detection system** using **Python** and **OpenCV**, employing image processing techniques like **Canny edge detection** and **Hough Line Transform**.
- Applied **region of interest masking** to isolate relevant road areas, enhancing **detection accuracy**.
- Calculated **lane slopes and intercepts** to identify lane boundaries and improve vehicle alignment.
- **Tech Stack:** Python, OpenCV, Computer Vision Techniques (Canny Edge Detection, Hough Line Transform), Video Processing.

CPUSCHEDULARVISUALIZATION (OPERATINGSYSTEMSPROJECT**) | LINK**

- Developed a **web application for visualizing scheduling algorithms** using basic web technologies like **JavaScript**, **HTML**, and **CSS**, enhancing understanding of complex concepts.
- Implemented **interactive simulations** for algorithms such as **FCFS, SJF, Round Robin, and Priority Scheduling**, with dynamic Gantt chart generation.
- Integrated **customizable input options** for process parameters such as arrival times, burst times, and priorities, with an **efficient backend logic** to compute and display key performance metrics like Turnaround Time and Waiting Time, enabling users to experiment with various scheduling scenarios.