Adarsh S Kumar

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Professional Summary

Motivated and goal-oriented B.Tech student in Computer Science and Engineering with a strong interest in software development and innovation. Experienced in contributing to a variety of impactful projects that address real-world challenges through creative problem-solving and technology-driven approaches. Demonstrates a consistent commitment to learning, adapting, and improving, with a deep curiosity for how systems work and how they can be optimized. Dedicated to applying theoretical knowledge in practical scenarios, collaborating effectively with peers, and maintaining high standards of accuracy, efficiency, and accountability.

Education

Bachelor of Technology (B. Tech) – Computer Science and Engineering	CGPA: 6.98
Prem Nazir Memorial Govt. HSS, Koonthalloor Higher Secondary Education	2018 - 2020 96.75%
Sr. Elizabeth Joel CSI EM HSS, Attingal	2017 - 2018
Secondary School Leaving Certificate (SSLC)	100%

2021 - 2025

Projects

Jolly Audience - Video Emotion Extractor

College of Engineering Trivandrum

- Engineered a full-stack video analysis tool using **React.js**, **Flask**, and **OpenCV** that detects and extracts smiles from event recordings with over **92%** accuracy.
- Processed videos at a speed of 10 frames/second using Haar Cascade Classifiers, achieving a 35% reduction in analysis time compared to baseline implementations.
- Created a web UI supporting uploads of up to **500MB** per file with real-time detection feedback and selective download of up to **25 highlight clips per video**.

Predictive Maintenance & False Fire Alarm Detection System

- Developed an ML-based predictive maintenance system using **scikit-learn** to classify failures from over **15,000 sensor readings**, improving prediction accuracy by **28**%.
- Integrated fire alarm detection, achieving 95% precision in distinguishing false alarms, and reducing unnecessary evacuations by over 40%.
- Built a responsive web interface with Materialize CSS and Flask to handle 1,000+ daily inputs from industrial users.

Gmail Summarizer - Email Compression Tool

- Created an email assistant using Flask, Google Gmail API, and Openai API to summarize content of emails up to 1,000 words in less than 3 seconds.
- Reduced email reading time by up to 65% for users handling over 100 emails per day, increasing
 productivity and message clarity.
- Handled secure OAuth 2.0 authentication and processed more than **5,000 emails** during pilot testing with **98.7% summary relevance**.

Employee Management System - DBMS Project

- Designed and deployed a full-featured employee database management system using **Flask** and **PostgreSQL**, streamlining HR processes across departments and roles.
- Enabled full CRUD functionality with validation layers for managing employee profiles, positions, skills, and project assignments securely and efficiently.
- Implemented a scalable backend architecture with relational data modeling, resulting in a 50% reduction in manual tasks.

Technical Skills

• Programming Languages: Python, C/C++, Java (basic)

• Web Development: HTML, CSS, JavaScript, React.js, Flask, Django

• Databases: MySQL, PostgreSQL

Leadership and Extracurricular

• Volunteer – Dhwani and Drishti, College of Engineering Trivandrum

• Volunteer – Dot Slash Technical Fest

Certifications

- The Joy of Computing using Python NPTEL
- Web Development Bootcamp Devtown