Achyuth K

Bachelor of Technology

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 GitHub Profile

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EDUCATION

- **PES University (RR Campus), Bangalore**
  Bachelor of Technology in Computer Science and Engineering
- **Pre-University (PUC), (96% PCM) | 10th (SSLC), Central Board of Secondary Education (CBSE) (93.8%)**

ABOUT ME

- I am Achyuth, currently in my 4th year of B.Tech. I have a strong interest in problem-solving, data structures algorithms, machine learning, NLP, and parameter-efficient fine-tuning methods such as LoRA. I am also enthusiastic about cybersecurity and exploring Web3 technologies including blockchain-based systems.

EXPERIENCE

- **Center for Cloud Computing and Big Data (CCBD), PES University**

Jun 2025 – Jul 2025   Intern
  - Engineered a LoRA-based fine-tuning pipeline (4-bit quantization) on Mistral-7B-Instruct, with additional experiments on Phi-2 and TinyLlama-1.1B.
  - Trained on a schema-aware dataset of over 4,000 NL–DSL query pairs, achieving a 70% structural similarity score on the fine-tuned Mistral model.
  - Planning to publish a research paper detailing this work and its results.

PERSONAL PROJECTS

- **Adaptive Text Summarization with Tailored Readability for Kannada**   *Ongoing*

Developing a controllable summarization model for Kannada text
  - Building a controllable text summarization system that generates summaries at different readability levels to serve diverse audiences.
  - Designing a modular pipeline for data collection, text normalization, morphological analysis, and custom readability evaluation tailored for Kannada.
  - Currently in progress with iterative refinements based on human evaluations and targeted readability metrics.

- **Audia Hub:- A web music player**

A website where you can listen to music and podcasts and have fun.
  - This lets users stream and manage their music library directly in a browser. It features playlist creation, search, and responsive design for seamless listening across devices.
  - Technology Used: Javascript, MongoDB, React, CSS, HTML.

- **Foodie Express:- A Food Delivery Web Application**

A food delivery platform built for the OOAD course, showcasing real-world use of design principles and multiple design patterns.
  - Enables users to browse menus, place orders, and track deliveries, with restaurant-side management and live updates.
  - Applied Strategy (for delivery methods), Observer (for notifications and order tracking), Abstract Factory (for UI components), and Decorator (for flexible menu item customizations).
  - Technology Used: Java, Spring Boot, Thymeleaf, HTML, CSS.

- **Safe Guard Band**

A Fall Detection Band
  - Developed a fall detection band using the MPU6050 sensor and ESP32 microcontroller to accurately detect sudden falls through motion analysis.
  - Integrated a heartbeat sensor to continuously monitor the wearer's vital signs in real-time.
  - The system provides immediate alerts for potential health emergencies, enhancing safety for elderly individuals.

TECHNICAL SKILLS AND INTERESTS

Languages: C/C++, Python, JavaScript, TypeScript, SQL

Frameworks & Libraries: PyTorch, TensorFlow, React.js, C++ STL

Tools & Platforms: Git, Docker, VSCode, Postman

Databases: MongoDB, MySQL, PostgreSQL, Elasticsearch

Interests: Machine Learning, NLP, Parameter-efficient fine-tuning (LoRA), Cybersecurity, Blockchain/Web3

Soft Skills: Problem Solving, Self-Learning, Adaptability