BALAJI CHEJARLA

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Education

Bachelor of Technology ,Computer Science and Engineering specialized in (AI and ML)

Siddharth Institute of Engineering and Technology, Puttur, A.P

Graduation Year: 2025 | CGPA: 9.24/10

Skills

Programming & Frameworks: Python, C++, Java, TensorFlow, PyTorch

Data Analysis & Visualization: Pandas, Matplotlib, NumPy

Tools & Platforms: Git, GitHub, Jupyter Notebook, PyCharm, VS Code, Anaconda

Other tools: ROS2, Gazebo, OpenCV

Projects

1. Personalized Companion Robot (ongoing)**:**

Technologies: Python, C++, OpenCV, ROS2, Gazebo, PyTorch.

- Real-time environment recognition and Room-cleaning capability.
- Voice-command-based web browsing and information retrieval
  (e.g. product reviews).
- Utility functions: clock, timer, reminders, task management.
- Responses are based on user emotions.
- Assists users in their respective fields of work.
- For a detailed mind map, refer to this [mind map].

2. Dynamic Feedback Driven Fine-Tuning for Speech Emotion Recognition:

Technologies: Python, Tensorflow, pickle, sklearn .

- Implemented a dynamic feedback mechanism, improving model accuracy by **7%** based on real-time user feedback.

- Designed real-time learning rate adaptation, enhancing convergence speed by **30 %**.
- Optimized fine-tuning during low CPU utilization, reducing computational overhead by **20%.**
- Currently preparing to publish the project on GitHub.

3. Automation Tool for College Results:

Technologies: Python, Telegram API, SQLite3, BeautifulSoup4, urllib, pandas.

- Developed an automation tool to retrieve results from the college website, simplifying the process by **90%.**

- Integrated the tool with Telegram bot for easy access and user interaction. Increased efficiency of results analysis by **30%**.

- Saved up to **20%** of our lecturers' time in analysing our results and CGPA.

- Link: Repo

Work Experience

Python Developer Intern – CG Innovations (Sep 2024 – Nov 2024)

- Created and maintained Python scripts for data processing, automation, and application development.

- Automated tasks that previously took 5 hours, reducing processing time by 20%

- Processed and analyzed datasets of size up to 3 GB.

Certifications

- Programming using python, NPTEL (90%, gold medal),
- Introduction to AI, LinkedIn,
- Becoming an effective leader, edx.