UPENDRA PALURU

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Profile

Aspiring software engineer skilled in data structures, algorithms, and web development. Proficient in Python, C++ and React with experience building AI-powered and scalable web solutions. Currently enhancing skills in software development, machine learning and seeking opportunities to apply them in real-world projects.

Education

National Institute of Technology, Durgapur   November 2022 - May 2026
Bachelor of Technology in **Mechanical Engineering**   *CGPA-7.06*

Projects

TaxEase - AI-Driven Tax Filing | *React, Python, Streamlit, Meta LLaMA*   GitHub Repo Link
- Built TaxEase.AI, an AI-powered tax solution that streamlines **PAN-based onboarding, automates filing,** and ensures error-free compliance, maximizing savings for individuals and businesses.
- Used **KD-trees ($O(\log n)$)** and **knapsack optimization ($O(nW)$)**, boosting deduction efficiency by 30%.
- Integrated **Meta-Llama-3.1-8B** and Kommunicate chatbot for personalized, creative tax-saving tips.

MedEase - Doctor Specialist Recommender | *Python, BeautifulSoup, Streamlit*   GitHub Repo Link
- Built a **AI-powered doctor recommender** by designing web crawlers for Practo.com, preprocessing through data cleaning, missing value imputation, and symptom binarization.
- Predicted diseases using **KNN** and **Gaussian Naive Bayes** based on symptom inputs.
- Embedded a **chatbot** trained with custom disease and doctor data.

AI-Powered Size Chart Generator for Apparel Sellers | *Python, Scikit-learn, Plotly*   GitHub Repo Link
- Engineered an innovative **AI-powered solution** that creates accurate, personalized apparel size charts using **data-driven insights**, enhancing customer satisfaction and reducing returns.
- Utilized **KMeans**, **DBSCAN**, and **Agglomerative clustering** to effectively segment user data.
- Created interactive visualizations with **Plotly** and **Streamlit** for real-time, data-informed size recommendations.

Terminal Emulator | *C++, QtDesigner*   GitHub Repo Link
- Engineered a **Linux terminal emulator**, mimicking core functions via system calls for efficient process management.
- Implemented pseudo terminals to streamline emulator–shell communication, manage child processes and I/O.
- Applied event-driven development and OOP principles for responsive, modular terminal behavior.

Positions of Responsibility

GNU/Linux Users Group | *Senior Developer* | *Python, ReactJS, AI/ML*
- Mentored **200+ students** in events like **Open Source Starter Pack, ML Workshops**, and **Ten Days of Code**, boosting participation by **30%** through collaborative and reliable leadership.
- Managed NIT Durgapur's coding community's **digital presence**, driving a **25% growth in online engagement** with responsible and collaborative management.

Skills

Languages	C/C++, Python, SQL, JavaScript, HTML
Frameworks/Libraries	ReactJS, Node.js, Streamlit, Tailwind CSS, Firebase
Data Analysis & ML	Pandas, NumPy, Scikit-Learn, Matplotlib, Machine Learning
Tools & Platforms	Git/GitHub, Vercel, AWS, MySQL, BeautifulSoup(web scraping), EasyOCR, OpenCV, Power BI
Core Courses	Database Management Systems, Operating Systems, Object-Oriented Programming
Non-Technical Skills	Effective Communication, Collaboration, Time Management, Content Writing

Achievements

- Flipkart GRiD 6.0 **Semi-Finalist** (Software Development Track).
- Completed **Google's Gen AI** course on LLMs, prompt engineering, and a hands-on capstone project.
- Secured an AIR below 5000 and received the **Reliance UG Foundation Scholarship**.
- Cleared the AMCAT Exam and earned the **FFE Scholarship** for academic excellence.

Certifications

Machine Learning Specialization by DeepLearning.AI ↗

Coding Platforms

Solved over **200+** problems across platforms like **LeetCode**, **GeeksforGeeks**, and **CodingNinjas**.