Umesh Kumaar

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Education

Vellore Institute of Technology, Vellore — Vellore, TamilNadu
Bachelor of Technology in Computer Science and Engineering ***CGPA: 8.33*** — *Aug. 2021 – May 2025*

Maharishi International Residential School — Chennai, TamilNadu
Higher-Secondary Education (XII) – CBSE — *June. 2019 – May 2021*

Experience

SAMSUNG PRISM Intern — March 2024 – June 2024
Samsung Research Institute (SRI-B) — *Bengaluru, Karnataka*

- Developed and launched PlatterAR, an innovative Unity-based application as part of the Samsung Prism Metaverse program, aimed at enhancing the dining experience for users
- Implemented intuitive user interfaces in Unity using C# for seamless scene switching and navigation, including a dynamic home screen and a visually appealing menu showcasing exotic dishes.
- Leveraged augmented reality (AR) to offer real-time dish visualization on users' plates, complete with detailed ingredient lists and nutritional information, enriching the dining experience.
- Successfully Converted PlatterAR into an APK for Android users (v7.0) and conducted thorough compatibility and performance testing across diverse hardware specifications .

Design Intern — May 2019 – July 2019
Maven Silicon — *Bengaluru, Karnataka*

- Designed an AHB to APB bridge using Verilog and successfully synthesized the design
- Prepared and presented a detailed report outlining the functionality and performance of the bridge

Projects

ProjectManagerAI | *GenAI, Python, Flask, Javascript, Firebase* — June 2024 – Present

- Developed a comprehensive web application with a Flask backend and JavaScript, HTML, and CSS frontend. Integrated Firebase Storage for secure document management and retrieval.
- Utilized prompt engineering and Llama API to generate optimized project plans from text extracted from PDF requirement documents, project plans are displayed dynamically on a web application.

License Plate Detection and Logging | *Python, YOLOv5,* — November 2023 – December 2023

- Trained and integrated a customized YOLOv5 model achieving 99.5% mAP50 accuracy and 67.3% mAP50:95 accuracy for license plate detection.
- Implemented OCR with PyTesseract to accurately extract text from detected license plates. Designed a validation process to select the best license plate number from OCR results.
- Automated logging system to store license plate information in excel file, enhancing real-time tracking.

Freesic | *Python, Youtube API* — October 2023 – November 2023

- Developed Freesic, a desktop music player with a user-friendly Tkinter-based GUI, supporting playback options for over 1,000 songs, as part of the "Backdrop Build" program.
- Integrated with YouTube and Google Custom Search API, achieving a 95% success rate in retrieving accurate song and album covers.

Technical Skills

Languages: **Python**, C/C++, JavaScript, Java, SQL, HTML/CSS
Frameworks: ReactJS, Flask
Developer Tools: Git, Unity Engine, VS Code, Eclipse, Jupyter
Libraries: Sci-kit Learn, pandas, NumPy, Matplotlib

Achievements

- Ranked 4 in ForkThis'23 an Open Source Contribution Competition conducted by Computer Society of India (CSI).
- Finished top 5 in 36 hour Hackathon conducted by IEEE SPS VIT 2023
- Paticipated and led a team to second round in Flipkart GRID 5.0 Hackathon 2023.