

# Umesh Kumar

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## EDUCATION

### Vellore Institute of Technology, Vellore

Bachelor of Technology in Computer Science and Engineering **CGPA: 8.33**

Vellore, TamilNadu

Aug. 2021 – May 2025

### Maharishi International Residential School

Higher-Secondary Education (XII) – CBSE

Chennai, TamilNadu

June. 2019 – May 2021

## EXPERIENCE

### SAMSUNG PRISM Intern

February 2024 – July 2024

Samsung Research Institute (SRI-B)

Bengaluru, Karnataka

- Successfully developed and launched PlatterAR, an innovative Unity-based application in 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 (8 scenes) and navigation, including an interactive home screen and a visually appealing menu showcasing exotic dishes.
- Leveraged augmented reality (AR) to offer real-time dish visualization on user's plates, complete with detailed ingredient lists and nutritional information, enriching the dining experience.
- Ported PlatterAR into an APK for Android users (v7.0) and conducted thorough compatibility and performance testing across diverse hardware specifications, resolving issues on 33% of tested devices.

### Design Intern

August 2023 – October 2023

Maven Silicon

Bengaluru, Karnataka

- Designed an AHB to APB bridge with 4 modules 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

- Optimized project management by developing a web application that leverages Generative AI to provide actionable insights, enhancing planning efficiency for project managers and businesses.
- Pipelined Gemini 1.5 Flash API with prompt engineering techniques using React.js for the frontend, and firebase, flask for backend integration, to deliver advanced AI-driven insights

### ParkEase | Python, YOLOv5, Twilio, UPI

November 2023 – August 2024

- Trained and integrated a customized YOLOv5 model with 99.5% mAP50 accuracy and 67.3% mAP50:95 accuracy for precise license plate detection, paired with OCR to accurately extract and validate text.
- Implemented an automated UPI payment system via Twilio, linking detected license plates to phone numbers and sending SMS payment requests for parking fees.
- Created a logging system that stores license plate data in Excel, enabling real-time tracking and streamlined data management.

### Ethereum Deposit Tracker | Python, web3, PostgreSQL, Grafana

August 2024 – September 2024

- Developed an Ethereum Deposit Tracker to monitor and record real-time deposits on the Beacon Deposit Contract, using Web3 and PostgreSQL for data management.
- Created a Telegram bot to notify 1,000+ users of new deposits and integrated Grafana for real-time data analysis and data visualization using live dashboards.

## TECHNICAL SKILLS

**Languages:** Python, C/C++, Java, JavaScript, HTML/CSS

**Development:** Flask, FAST API, PostgreSQL, MySQL

**Data Science & Analytics:** Pandas, Numpy, Matplotlib, Grafana, Natural Language Processing (NLP)

**Tools & Technologies:** Git, Unity Engine, VS Code, Jupyter, Linux, Raspberry Pi, Arduino, Blockchain Technology

## 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 organized by IEEE SPS VIT 2023
- Launched Freesic, an open-source desktop music player, supporting playback for 1,000+ songs. (BackdropBuild)