Vivaan Mannur

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EDUCATION

Vellore Institute of Technology , Bhopal *Sep 2021–May 2025*
Bachelors of Technology – ECE With AI and Cybernetics **CGPA 7.74**
Relevant Coursework: **Data Structure & Algorithms**, **Object Oriented Programming**

PROFESSIONAL EXPERIENCE

Suvidha Foundation | Web Developer Intern *Nov 2022 – Dec 2022*

- Projects: Developed projects, honing technical skills in Python, and SQL
- Mentorship: Collaborated with a mentor for **15 hours/week** to further develop programming skills
- Software Development: Improved project delivery timelines by 25% through Agile methodologies and applied number matrix algorithms in 3 projects
- Technical Skills: Reduced processing time for matrix operations by **30%** and enhanced team productivity by **15%** while collaborating in a 5-member team

ACADEMIC PROJECTS

Smart Crop Weed Detection and Management System

- Developed an AI-based weed detection system using YOLOv12 with 93.2% accuracy for 12 cotton weed species.
- Implemented a CNN model to classify weed growth stages with 92.5% accuracy across 9 categories.
- Built a web interface delivering annotated results, management strategies, and economic impact analysis.
- Enabled up to 47% reduction in herbicide use through precision agriculture and targeted interventions.

SyncTew DEMO

- Technology: Uses a 14-channel EEG headset with a **256 Hz** sampling rate and 16-bit signal resolution to capture brainwaves and translate them into game commands via a convolutional neural network (CNN) with 95% accuracy
- Performance: Achieves an average response time of **150 ms** from thought to action, with 95% command recognition accuracy in controlled tests and 90% in real-world tests
- Accessibility: Provides a new level of game interaction for individuals with limited mobility, targeting a user satisfaction score of 85/100 and an anticipated user base of 100,000 within the first year
- Future Developments: Plans to enhance the algorithm to recognize 20 distinct commands and improve accuracy to **98%** , with potential expansion to other games and applications

Solar wireless EV charging system

- Designed a wireless charging system for EVs, eliminating cables and enhancing user convenience by 90%
- Improved Efficiency by 20%, targeting 90% overall efficiency
- Enhanced User Convenience by 50%, reducing charging time and effort
- Ensured Safety Compliance with industry standards, reducing electromagnetic emissions below **87 µT** at 10 cm, and constructed a prototype with 90% effectiveness for performance evaluation

ACHIEVEMENTS & CERTIFICATES

- Successfully completed a hackathon, created an innovative AR project using Spark AR Studio and collaborating with a **5-member** team to implement augmented reality experiences
- Involved in **5** AI-related projects, gaining practical experience with cutting-edge technologies
- Actively involved in community service initiatives, helping organize **4** events aimed at social betterment
- Assisted in planning and executing **8** technical events, workshops, and seminars, boosting attendance
- Earned **4** certifications in Spark AR community hackathons, MATLAB fundamentals, web development basics, and data analytics fundamentals

ADDITIONAL INFORMATION

- **Technical Skills**: C++,C, HTML,CSS,JavaScript
- **Soft Skills:** Leadership, Team Management, Creativity
- **Languages Known:** English,Kannada,Hindi