YBR Krishna Vamshi

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Education

B.Tech in Electronics and Communication Engineering, <div align="right">2021 – present | Chennai, India</div>
Amrita vishwa vidyapeetham, CGPA: 8.31 (upto VI semester)

Professional Experience

Summer Research Internship at NIT-Tiruchirappalli <div align="right">Apr 2024 – present</div>

- Developing TrustGuard, a security framework using power side-channel analysis and machine learning to detect IoT malware.
- Demonstrating TrustGuard's ability to detect malware attacks, including code injection and code reuse by Utilizing high-level synthesis (HLS) to enable rapid prototyping and on-chip machine learning for real-time malware detection.(Ongoing)

Conference Papers

- Intelligent Systems and Machine Learning Conference (ISML)-2024 :
  An Algorithmic approach for maximizing the Return on Investment (ROI) using Simple Moving Average (SMAC)
- IEEE CONECCT- 2024
  Enhancing Combinational Circuit Design through Leveraging the CSWAP Gate in Quantum Computing for Improved Performance and Accuracy.

Technical Skills

Digital Design (VHDL, Verilog, Keil μVision) | **Circuit Design and Analysis** (Arduino IDE, Proteus, Multisim, LTSpice, TinkerCAD) | **CST Studio** | **AutoCAD: Basic** | **IBM Qiskit** | **MATLAB: Beginner**

Projects

Enhancing Combinational Circuit Design through Leveraging the CSWAP Gate in Quantum Computing for Improved Performance and Accuracy <div align="right">Dec 2023 – Mar 2024</div>

- Pioneered quantum combinational circuits and achieved reduction in circuit complexity ,resulting in increase of computational efficiency.
- Orchestrated the parallel operation of oracles, optimizing performance and reducing computational overhead. Solved complex problems efficiently by propelling the advancement of quantum computing capabilities.
- Validated with Qiskit, revolutionizing Boolean operation implementation for quantum computing.

Home automation using Raspberry pi and Telegram Bot <div align="right">Aug 2023 – Nov 2023</div>

- Researched and synthesized insights from 10 literature papers, contributing to a comprehensive understanding of home automation technologies, leading to increase in project effectiveness.
- Engineered Raspberry Pi integration with Telegram, resulting in a responsive bot for appliance control and a better improvement in user experience.

Smart Agriculture Monitoring System <div align="right">Jan 2022 – Apr 2022</div>

- Fabricated and deployed a Smart Agriculture Monitoring System leveraging IoT, achieving increase in crop yield through precise environmental control.
- Integrated humidity and photosonic sensors, enabling automated lighting adjustments based on realtime data.
- Carried out a soil humidity sensor-driven irrigation system, reducing water usage while maintaining optimal plant health

Certificates

- People and Soft Skills for Professional and Personal Success Specialization, Coursera.
- Quantum computing workshop Organized by IBM at DR.Mahalingam University
- Managing Emotions in Times of Uncertainty & Stress, coursera
- Internet of Things Workshop organized by Techobyte , IIT-Madras

Organizations

Active member in IEEE student branch
Successfully organized and executed a Digital Escape Room event focused on digital electronics during our college technical fest. Actively participate in IEEE-organized events and workshops, continually enhancing skills and knowledge in the field.