Randy Jonathan Namburi

Email me: randyj7ie@gmail.com **LinkedIn:** https://www.linkedin.com/in/jsu05/
Call me: +353 892562470 **Address:** 9 St Pappins Road, Glasnevin, Dublin, D11DH93

PERSONAL PROFILE

Innovative IT graduate with a valuable experience in quality assurance, test planning, technical support and software testing. Eager to gain proficiency in embedded systems, leveraging diverse methodologies and delivering engineering solutions for achieving organizational goals. Possess strong analytical and statistical skills to identify, capture, analyze, and report critical process metrics and execute tasks in a high-pressure environment. Looking for a position in a stimulating environment with the opportunity to gain technical expertise and knowledge while contributing towards the achievement of organizational objective of developing innovative products.

WORK EXPERIENCE

ECIL – Intern;   *May 2019 – June 2019*
- Assisted in the development of a signature detection and verification system using soft computing
- Conducted testing to analyse the performance of Self-organizing map, SVM and RBF Kernel when detecting forgeries
- Demonstrated efficiency in using MATLAB for building the solutions and testing them

PROJECTS

Real Time Anomaly Detection using Edge Devices
- Implementation of architectures based on cloud and edge computing to detect anomalies in a network which uses sensors.
- Implemented a cloud architecture where the Edge nodes send the data from their sensors to a central node to detect anomalies.
- Implemented a fully connected peer to peer (p2p) architecture and a partially connected peer to peer (p2p) architecture where each node will decide whether an anomaly is present in the network.
- Deployed various machine learning models like Logistic Regression, Random Forest, KNN and LSTM to compare their performance when Raspberry Pi 3B+ has been deployed in the Edge nodes for detecting temperature anomalies.
- Demonstrated that partially connected P2P architecture is best fit for anomaly detection for detecting anomalies with less complexities and security are taken along with reliability of the architecture.

Deployment of Deep Neural Network Accelerator on SoC FPGA for Edge applications
- Deployed pruned versions of Deep Neural Networks like RESNET50 on Zynq Ultra96 v2 FPGA board.
- Designed the DSP blocks using Vivado Software.
- Demonstrated that pruned versions of Deep Neural Networks run faster on a FPGA board while also maintaining high accuracy results.
- Interfaced Logitech C270 camera with FPGA hardware using UART for live testing.
- Debugging and collaboration with the project group for the successful completion of the project

LoRaWAN based IoT alert system
- Designed a device which captures heartbeat data sends them to LoRa receiver which continuously monitors for any anomalies.
- JSON payload is transmitted from the transmitter which has information related to latitude, longitude and heartbeat.
- Used TTGO LoRa32 v2.1 ESP32 dev kit to transmit and receive data and MAX30102 to capture heartbeat data.

TECHNICAL SKILLS

Programming Languages: C/C++, python, java, Verilog, VHDL, MATLAB
Software Packages: MATLAB, Keras, Multisim, NgSpice, Eagle, Yocto and Keil
DevOps: CI/CD GIT (Continuous Integration/ Continuous Deployment), Github, Jenkins

Operating Systems: Linux, Windows
IDE: Eclipse, Qt, Visual Studio
ISA: Basic Knowledge of RISC-V architecture

EDUCATION

Dublin City University, Electronic and Computer Engineering | Master of Engineering (MEng) | Dublin, Ireland | November 2022
Concentrations: Embedded Systems, Cryptography, DSP, Machine Learning, Artificial Intelligence, Computer Science, Internet of Things (IoT), Computer Networking | Grade: 2.1
Visvesvaraya National Institute of Technology, Electronic and Communication Engineering | Bachelor of Technology (BTech) |
Nagpur, India | September 2020
Concentrations: Embedded Software, Wireless Processing, Digital Signal Processing, Machine Learning, Image Processing, Computer Vision | CGPA: 6.72

PUBLICATIONS

An Annular Ring antenna with slotted ground plane for dual band wireless applications
Namburi Randy Jonathan, Tangalla Manoj Kumar, Paritosh Peshwe, Srinivas Doddipalli, Ashwin Kothari. 2018 ICETE 2019, 22-23 March 2019, Osmania University, Hyderabad. DOI:10.1007/978-3-030-24318-0_37

ADDITIONAL INFORMATION

Visa Stamp: 1G
Languages Known: English, Telugu and Hindi
Key Skills: Communication, Problem-solving, Time Management, Team Player, Critical Thinking and Relationship Building
Interests: Automation, Pharmaceutical and Biomedical industries