THUVARAGA JEYASEELAN

ThuvaragaJeyaseelan   Thuvaraga Jeyaseelan   e18367@eng.pdn.ac.lk   +94779340373

EDUCATION

Faculty of Engineering, University of Peradeniya   December 2019 - August 2024

Bachelor of Science (Honours) in Electrical and Electronic Engineering (GPA - **3.4/4.0**)

WORK EXPERIENCE

UEXplus (True and DTAC Merge Project – Huawei)   (September 2024 - October 2025)

Radio Network Planning and Optimization Engineer

- Prepared and analyzed SSV reports for 2G to 5G technologies using Genex Cloud and Genex Assistant Lite.
- Conducted drive test data analysis, verified site KPIs, and optimized network performance by resolving issues like poor coverage, cross-sector interference, low SINR and other performance anomalies.
- Coordinated with technical teams to resolve site issues.
- Utilized RF tools like Google Earth Pro, and Genex Assistant Lite.

Huawei Technologies Lanka Co., (Pvt) Ltd   (August 2023 - October 2023)

Telecommunication Engineering Intern (Wireless)

- Gained knowledge about mobile networks (GSM, UMTS, LTE, 5G NR), and key performance indicators (KPIs),
- Acquired in-depth knowledge of wireless telecommunications, radio access networks (RAN), core networks, RF planning and optimization, and networking.

Sri Lanka Telecom PLC   (May 2022 - August 2022)

Telecommunication Engineering Intern

- Built a strong foundation in fiber and copper network infrastructure.
- Learned about telecom software systems (AMS, NMS, WFM, billing) for network management.
- Gained knowledge of wireless telecommunications fundamentals and mobile networks infrastructure.

PROJECTS

Intruder Detection System for Night Surveillance (Group Project)

- Developed a CCTV-based surveillance system with facial recognition to enhance security automation.
- Improved video frame visibility for human detection and facial recognition.
- Implemented face recognition for intruder identification and verification of known individuals.

Technologies: Raspberry Pi 4, SSD MobileNet V2, Haar Cascade, Integrated Cega HE+CLAHE, Siamese Triplet Loss

Panic Detection and Alert System *(Group Project)*

- Designed a system to detect panic using heart rate data, where a pulse sensor continuously monitors the heart rate. If the heart rate exceeds a predefined threshold, the system triggers an alert to emergency contacts.
- When the pulse sensor detects a heart rate exceeding 100 BPM (beats per minute), the smartwatch sends an emergency notification to guardians.
- Integrated a GSM module to automate messaging and send emergency alerts to guardians via SMS.

Technologies - ESP8266, Pulse Sensor, GSM Module

Night Security Smart Alarm System for Theft Prevention *(Group Project)*

- Developed a security alarm system for nighttime protection using assembly language, incorporating a relay, Arduino Uno, PIR sensor, and Bluetooth module to secure residential premises.
- The PIR sensor detects motion, and upon detecting any movement, it triggers the alarm system to alert the household.

Technologies - Arduino Uno, Assembly Language, PIR Sensor, Bluetooth Module, Relay

ED-Eureka *(Group Project)*

- Developed an AI-based educational platform for Sri Lankan Advanced Level and Indian NEET students, designed to provide personalized learning experiences.
- Built a web application with customizable features, including verified admin privileges for content management and monitoring.
- Implemented both front-end (Vue.js) and back-end (Firestore) functionalities, enabling a seamless user experience and real-time data management.

Technologies: Vue.js, Firestore

PUBLICATIONS

- **Low-Cost Intruder Detection for Night Surveillance Using Advanced Image Enhancement and Deep Learning Techniques**
  in Selected Proceedings of the 2nd International Engineering Research Symposium (IERS 2024); 14 Aug; Colombo, Sri Lanka, Springer Nature, 2025.
  DOI: 10.1007/978-981-96-1399-1_15

TECHNICAL SKILLS

- **Telecom Tools:** Genex Assistant Lite, WNG Analyzer, Google Earth
- **Wireless:** GSM, UMTS, LTE, 5G NR, RAN, Core Networks
- **Programming:** Python, C, SQL, JavaScript, R, HTML/CSS
- **Frameworks/Libraries:** Flask, Vue.js, TensorFlow, OpenCV, Pandas, Scikit-Learn
- **Other Software:** MATLAB, Octave, Circuit Maker, Proteus, AutoCAD, MS Office

CERTIFICATIONS

- 4G Network Fundamentals
- Introduction to the Internet of Things and Embedded Systems
- Programming for Everybody (Getting Started with Python)
- Python Data Structures
- C for Everyone: Programming Fundamentals
- Machine Learning for All
- Basic Image Classification with TensorFlow
- Exploratory Data Analysis with Seaborn

PROFESSIONAL SKILLS & ABILITIES

- Ability to work under pressure
- Hardworking
- Fast learner
- Strong communication skills
- Team collaboration
- Time management
- Data analysis and problem solving
- Leadership skills
- Team player and multitasking ability

INTERESTS

- Radio Access Network (RAN), Core Network Engineering
- Network Performance Optimization
- Networking and Cybersecurity
- System Administration & Cloud Computing
- Artificial Intelligence in Telecom
- Telecom Research and Innovation
- Software Development for Network Solutions
- Telco Product Development
- Data Science and Machine Learning

REFERENCES

Eng. (Dr.) H.M.V.R. Herath
Professor
Department of Electrical and Electronic Engineering,
Faculty of Engineering,
University of Peradeniya.
Email: vijitha@ee.pdn.ac.lk, +94 (81) 2393436

Dr. Himal Suraweera
Senior Lecturer
Department of Electrical and Electronic Engineering,
Faculty of Engineering,
University of Peradeniya.
Email: himal@ee.pdn.ac.lk, +94-81-2393434