KESAVAKUMAR SIVALINGAM

ENGINEER KUALA LUMPUR, 57000, MALAYSIA +60169816599

DETAILS

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LINKS

my.linkedin

my.github

my.website

AREAS OF FAMILIARITY

C

Qt

Git

C++

OOP

Gitlab

Github

Python

RestAPI

PyTorch

Postman API

Machine Learning

Software Engineering

Iot & Embedded Systems

Basic Networking Concepts

Data Structures and Algorithms

LANGUAGES

Tamil

Malay

English

PROFILE

An engineer with more than 3 years of experience in embedded systems using single-board computers, programming, and Internet of Things. Aiming to explore the crossover between engineering and computer science. Possesses a brief experience and knowledge of working with a variety of computer platforms, languages, and frameworks.

EDUCATION

Foundation In Engineering, Multimedia University, Cyberjaya
June 2014 — June 2015

CGPA: 3.00/4.00

B.Eng. (Hons) Electronics majoring in Computer, Telecommunications, Multimedia University, Cyberjaya
November 2015 — November 2019

CGPA: 3.35/4.00

EMPLOYMENT HISTORY

R&D Software Engineer at Willowglen MSC, Kuala Lumpur
March 2023 — March 2024

Involved the development of APIs to enable communication between front-end clients and servers, addressing code-related issues reported by superiors, and conducting unit-testing.

Projects :-

- *Rapid Transit System Link (RTS Link) Project Between Johor Bahru and Singapore*
  - Developed a **C++** browser application utilizing **Qt library** for launching web clients, incorporating **JavaScript, CSS** and **HTML** scripting to test and ensure seamless communication between the client and back end. This application empowers users to monitor and communicate with physical processes.
  - Created libraries with **RESTFUL APIs** to enable seamless communication between **web clients and servers**, facilitating real-time data retrieval from databases.
  - Integrated an API module into an existing simulation tool, enhancing its ability to communicate with and retrieve real-time data from databases.

AI Research Assistant at University of Malaya, Kuala Lumpur
October 2021 — February 2023

Focused on research on deep neural networks to improve model learning and accuracy.

Projects :-

- *Prediction of Birth Outcomes using Machine Learning*
  - Researched on **GANs** to manage missing values in tabular data while collecting pregnancy data at the Department of Obstetrics and Gynecology, UMMC.

- *Failure Identification in Deep Learning Networks and Machine Learning Predictive Analysis*
  - Studied the failure modes in **IMAGENET** and **MNIST** datasets using Topological Data Analysis (**TDA**) Mappers.
  - Identified ways that will enable them to detect corrupted data points for improved model accuracy.

Test Development Engineer at Onsemi, Seremban, Malaysia
October 2020 — July 2021

Transitioned the test platform of devices to a newer platform, document product results, conduct peer review with the product stakeholders, and liaise with senior engineers to integrate the new test platform into the test facility.

Projects :-

- *Test Platform Conversion of Semiconductor Device*
  - Modified device test solutions, conversion of the test platform to a newer version.
  - Performed Process Capability Index (CPK) analysis on semiconductor test.
  - Achieved 81% out of 100% in the employee goal performance assessment in the term 20/21.

Product Engineering Intern at Onsemi, Seremban,Malaysia
March 2019 — June 2019

Been part of development of new products, update production documents for easier manufacturing.

Projects :-

- *Segregation of Open, Short-Circuited Semiconductor Devices for Failure Rectification*
  - Identified the reasons behind short and open failures in semiconductor packages using bench tests, semiconductor X-Ray Imaging, and curve tracing.
  - Presented the results to the stakeholders during the monthly peer review.

★ PROJECTS

Build an Inelastic Collision Based Automobile Crash Detection and Alert System via 3G Network , Embedded System Design
September 2019

An accident detection system that extracts the location and timestamp of an accident and alerts the concerned authorities via an android application.

Developed a Cloud Simulator using NODE MCU, Embedded System Design
March 2019

A system that indicates the present weather through a cloud-like simulation that incorporates RGB lights and a torque motor.

Implemented Centralized Home System with Near Field Communication (NFC) using Raspberry Pi, Embedded System Design, NFC, BLE
August 2018

Students learning how to use chemical apparatus can simply use an android app to view their preferred course materials on the TV through Bluetooth Low Energy and Near Field Communication.

Developed a Maze Game using C++

Created an interactive game where players navigate through challenging mazes, encountering obstacles such as monsters and solving riddles to progress.

Developed a mini parking system using Microcontroller - MCS 8051, Embedded System Design
October 2017

Integration of motion sensors, 7-Segment Displays, and MCS-51 microcontroller to keep track of the number of cars entering and leaving a parking lot.

PUBLICATIONS

Sivalingam, K. (2020). Life Case: Inelastic Collision based Automobile Crash Detection and Alert System via 3G Network. Journal of Engineering Technology and Applied Physics , 2(1), 7–14. https://doi.org/10.33093/jetap.2020.2.1
June 2020

An accident detection system that extracts the location and timestamp of an accident and alerts the concerned authorities via an android application.

CERTIFICATIONS

Cisco Certified Networking Associate (CCNA) - Ongoing
March 2024 — Present

EN 50128:2011 + A2:2020 (Generic Requirements, Techniques & Measures, Testing, Verification & Validation) by Ms. Lucia Capogna, Aegis Engineering Systems
July 2023

Machine Learning | Coursera
August 2021

Certified Network Engineer for IPv6 (Silver)
August 2020

EXTRA-CURRICULAR ACTIVITIES

Vice President - Institution of Engineering Malaysia (IEM), MMU Student Section
March 2019 — March 2020

Organized an academic talk on Wolfram Mathematica software under IEM Student Section, MMU. Been a part of the co-organizing committee of the industry forum entitled “Trends in Artificial Intelligence: What’s in Store for the Engineers and the Community?”.

Head of Members of Welfare Bureau - Institution of Engineering Malaysia (IEM), MMU Student Section
March 2018 — July 2019

REFERENCES

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