Karthikeyan R

To be Electronics Engineer, With Computer science in mind

November 2,2001

College Of Engineering Guindy, Anna University

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Indian Citizenship

Social Network -



Github Project Page Link



LinkedIn Page Link





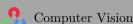
C/C++

















OpenLane

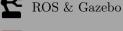




















CSS

Languages









Education

2019 - present Bachelor of Engineering in Electronics CEG. Anna University

and Communication Current CGPA - 9.54 out of 10

2019 Class XII National Victor Public School

Aggregate -95.2%

2017 Class X National Victor Public School

CGPA - 10 out of 10

2021 Undergraduate Researcher Integrated Systems Laboratory

Working on GPS Baseband Engine(Digital) IC design and Temperature

Sensor(Analog) IC design

2022 Undergraduate Researcher at Integrated Systems Laboratory

University of Toronto

Summer research under Prof. Roman Genov at the University of Toronto developed a RISCV chip for mask generation for codedexposure image sensors. Generated verilator model for the pulpissimo

Work Experience

May 2022 -Undergraduate Researcher at Integrated Systems Laboratory

August 2022 University of Toronto

Summer research under Prof. Roman Genov at the University of Toronto developed a RISCV chip for mask generation for codedexposure image sensors. Completed a Continuous Integration flow for the project. Completed an Automatic Documentation engine for the

project.

June 2021 -Undergraduate Researcher at The Integrated Systems Laboratory July 2021 Indian Academy of Sciences(IAS)

Project under Summer Research fellowship: Image based rendering based Reinforcement learning environment for end-to-end training to avoid sim2real, domain adaptation or domain randomization etc using

CUDA and OpenGL

May 2021 -Undergraduate Researcher at Integrated Systems Laboratory

January 2022 Anna University

Worked on GPS Baseband Engine(Digital) IC design and Temperature

Sensor(Analog) IC design

Projects

August 2021 -**Prometheus**

A Neuromorphic IC with LIF neurons fabricated in efabless MPW-3 present

shuttle using OpenLane and Skywater 130nm PDK

August 2021 -December

Hardware-Software Codesign for Verilog development over **PCIe**

2021

Developed a PCIe-Verilog verification setup for codesign using QEMU

and SystemC-TLM

June 2020 -Machine Learning Assisted Verification Methodology for October 2020 **Analog and Mixed Signal Circuits**

> Semiconductor Research Corporation(SRC)- Task 2982.001 The goal of the proposed work for AMS (Analog and Mixed Signal circuits) verification was to characterize the input space, the output space and the mapping between the two using ML techniques, in such a manner that the quality and efficiency of design verification is improved.

June 2020 - **Tyche**

October 2020 Adaptive traffic control using Deep Reinforcement Learning: Deep

Q-Network and Cityflow openAI gym environment

May 2021 - **RTDrone**

December An autonomous delivery drone for delivering packages to hostels from varsity gate made in collaboration with Robotics club of CEG using

ROS, Gazebo, AirSim, Pixhawk, YOLOV3, Nvidia Jetson Nano

May 2020 - **MERO**

June 2020 An extensive C++ image manipulation library with SIMD and GPU

support for acceleration

August 2021 -

Koch Fractal Based Wearable Antenna Backed with EBG

December Plan

2021 A low-profile antenna for wearable applications in WiMax standards.

Optimized for flexibility, efficiency and SAR values.

Achievements

2022 BIRAC Startup Grant- Funding for 'Ultrafast, Accurate

Nanopore DNA sequencing using custom ASIC' Startup

2022 Summer Undergraduate Researcher- University of Toronto

2020-2021 Summer Research Fellow- The Prestigious Indian Academy of

Sciences(IAS)

2021 First Position- Techstars Startup Weekend Chennai

2021 First Position- MATRIMAZE: An Advanced Matlab

Competition, Vision 2021

2021 First Position- Web development Hackathon, Abacus CEG 2021

2018 - 2019 Third Prize- Silicon Battles Delhi, Senior Quiz

Positions

April 2021 - Student director- Computer Society of Anna university- Web

present and app

December Director- Robotics Club of CEG

2020 - present

Workshops Attended

2017 **IOT Workshop**

An in-depth look at IOT with a special focus on Artificial Intelligence

and Cybersecurity

2020 Operating Systems Workshop, Kurukshetra 2020

A Deep look at Unix/Linux internals and File Systems

2020 Basic Robotics Workshop

A Basic Robotics workshop with hands-on experience

Extra-Curricular Activities

Sports Badminton, Handball

Music Flute