Gokul M. C.
PhD Researcher

Profile

A PhD student trying to break into the field of High Performance Computing. Ex-Rocket Scientist who built space grade electronic packages for electric propulsion for Indian satellites. Above all an entrepreneur in making, looking for technological opportunities in the field of computing and electronics. A passionate problem solver who is eager to learn new skills to accomplish challenging tasks.

Personal Info

Mobile
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LinkedIn
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GitHub
www.github.com/gokulmc

Technical Skills

C++
Advanced

Python
Advanced

Embedded Sys.
Advanced

Hardware dev.
Advanced

Docker
Intermediate

Kubernetes
Intermediate

Git
Intermediate

Scholarships

- Charpak Scholarship from Embassy of France in India
- All India Rank 745 in IIT-JEE among half a million aspirant who attempted
- KVPY Scholarship from Dept. of Science and Technology

Work Experience

Research Associate
National University of Singapore — Aug 2019 - Present

This project focuses on High Performance Computing for Radar Signal Processing
- Developed a Multi-Installment strategy for heterogeneous cluster of computers for SAR Image application
- Exploring deployment strategies using Kubernetes, Openshift and Docker

Software Dev. Intern
BluGraph Techologies — March 2020 - Present

- Developed RPi based re-streamer module for IP CCTV cameras using Gstreamer framework. Also developed RTSP cloud server for public streaming
- Installed and tested Hybrid cloud using MicroK8s

Director and Founder
Miltek Technologies Pvt. Ltd. — Jan 2020 - Present

- Developed digital inspection hardware and software for data entry along with optical encoder for meter reading for Fabric inspection machine

Rocket Scientist
Indian Space Research Organisation (ISRO) — Aug 2017 - July 2019

- **PPCU - 75mN & 300mN** - Developed India's first indigenous 300mN SPT thruster's Power Processing and Control Unit (PPCU) - 5KW
- Successfully fired the SPT thruster with PPCU in first attempt for full 3 hours
- Achieved 90% module efficiency using ZVS topology and current sharing
- **High Power BLDC Driver** - Designed 37KW BLDC driver for LoX Methane turbine pumps. Plume divergence location and regenerative cooling was used for thermal management.
- **Propulsion Health Monitoring System (PHMS)** - Used vehicle telemetry data to analyse the health of the launch vehicle, a requirement of human rating of a space flight

Educational Background

PhD in Electronics and Computing Engineering
National University of Singapore — 2019- Present

High Performance Computing for Radar Signal Processing
GPA - 5

M.Tech and B.Tech in Electronics Engineering
Indian Institute of Technology — 2012-2017

Minor in Industrial Design
CGPA - 8.5

Position of Responsibilities

Public Relations, Graduate Students Society
National University of Singapore — 2019- Present

Convener of TRRC, LSC, Hackathon committees
Indian Space Research Organisation (ISRO) — 2017 -2019

Keywords: **Cloud, Kubernetes, High Performance Computing, OpenShift, Docker, Python, Graphana, Git, Asciidoc, C++, PyQT, Project Management, Planning, Embedded, Power electronics, Product design, Digital Oceon**