SUYASH BAKSHI

suyashbakshi17@gmail.com https://www.linkedin.com/in/suyashbakshi (281) 710-2743

Introduction

I am a Computer Science Ph.D. student, with research focus on **High Performance and Energy efficient computing** systems and **Computer Architecture design and optimizations**.

Education

Degree	University	Year
Ph.D. Computer Science (High performance computing)	University of Houston, Main Campus	2018 – Present
M.S. Computer Science (Parallel and distributed computing)	University of Houston, Main Campus	2016 – 18
B.E Computer Science & Engineering	Rajiv Gandhi Technological University, India	2012 – 16

Areas of Interest

- High-Performance & Energy Efficient Computing
- SoC Performance Optimizations

Research Publications

- **A Highly Efficient SGEMM Implementation on Intel/Movidius Myriad-2** **Accepted in WAMCA-2020**

Work Experience

- **Software Engineer Intern (Geophysical Insights)** **Jun'20 – Aug'20**
  Successfully migrated the existing TensorFlow programs for seismic data interpretation from TensorFlow 1 to TensorFlow 2 enabling seismic interpreters to leverage latest GPUs with Tensor Cores and using features like multi-GPU training and mixed precision training.

- **Software Dev and Performance Optimization Intern (Geophysical Insights)** **Jun'19 – Aug'19**
  Implemented optimization strategies to improve the performance of Training and Prediction workflows in Machine learning algorithms for seismic data interpretation utilizing the TensorFlow library.

- **Android Developer (Outfield App)** **Jan'18 – May'18**
  Worked as an Android developer for a Customer Relationship Management (CRM) service provider, developing new features for the Android platform.

- **Graduate Research Assistant (UH College of Optometry)** **Aug'17 – Jan'18**
  Designed and implemented an Arduino based reading distance recorder gadget that is used to collect reading distance data of subjects. The collected data is analysed to understand the causes of myopia.

- **Google Sponsored Android Development Nanodegree Program (Udacity.com)** **Jan'16 – Aug'17**
  Pursued an independent coursework from Udacity on Android Development involving various aspects of **Professional Android Application Development and Testing**.

- **Linux System Administrator Training (Linux Solution Pvt. Ltd.)** **June'15 – Aug'15**
  Undergone training on **Linux OS** fundamentals, Creation and maintenance of networks and subnets, Installing and configuring TCP/IP, **Network Security and managing servers** (Web and Mail server, DHCP) and **System Administration**.

Technical Skills

- Programming Languages – C, C++, Java, Python, Arduino C, Android Development.
- Parallel Processing Tools – **OpenMP, OpenACC, MPI, CUDA**.
- Performance Measurement Tools – Performance API (**PAPI**), **Intel VTune, LIKWID, TAU**.

Academic Projects

- **Performance Evaluation of Algorithms in Parallel Systems** **Nov'17 – Dec'17**
  Used libraries **OpenMPI** and **OpenMP** to execute various graph algorithms in a parallel processing environment and measure their performance using **PAPI**. Also, compared the results to those of executing in a serial processing environment to evaluate the effect of parallel execution on the efficiency of algorithms.

- **Implementing MIS Algorithm using Spark** **April'17 – May'17**
  Implemented the Maximal Independent Set(MIS) algorithm using **Spark with Scala** and evaluated the effects of executing it in a parallel and distributed environment.

- **Cloud and IoT Integrated Smart Home Solution** **Sep'16 – Nov'16**
  Designed and evaluated the performance of a cloud based smart home solution. The project works using the **MQTT** (MQ Telemetry Transport) protocol specifically designed for low power IoT (Internet of Things) devices and consists of a **Smart Device** that can be controlled over the internet using a smartphone application.

- **ISSEM: An Integrated Sensing System for Environment Monitoring** **Aug'15 - April'16**
  Designed a Universal Environment Sensing and Monitoring System that can be used to monitor and forecast certain environmental elements such as Pollutant gas levels, Radioactivity, Heat Index and few common features such as Temperature and Humidity.

Additional Links

- **GitHub:** www.github.com/suyashbakshi