VinodReddy Gooty **u1142935@utah.edu**
https://gooty12.github.io/

Research Interests

Programming Languages, Compilers, Systems(in general)

Education

MS in Computer Science **GPA - 4/4** Aug 2017 - May 2019
University of Utah, Salt Lake City, USA
Current Coursework:
Programming Languages Advanced Operating Systems
Advanced Algorithms

B.Tech in Computer Science And Engineering **GPA - 8.10/10** May 2015
National Institute of Technology Calicut, Calicut, India
Selected CourseWork:
Data Structures and Algorithms OS Design
Compiler Design Computer Architecture

Work Experience

Thermofisher Scientific, Bangalore July 2015 -2017
Associate Software Developer

- Worked on the analysis of DNA sequences generated by Sanger Sequencer machines. Analysis involved mutation detection, sequences alignment, allele identification and confirmation, identifying the best match for a given sequence, etc.
- Sustained the company's multiple legacy codebases by performance and feature enhancements, fixing customer reported bugs.
- Ported the base-caller algorithm that identifies pure and mixed bases from Linux to Windows.
- *Technologies:* Java, C/C++

Projects

Implementation of Extended-Hyperwall Senior-Year Project

- Designed a hardware based support for Hypervisors (that manage the Virtual Machines) to enhance the security in virtual environment. Extended-Hyperwall augments Hyperwall, proposed in the literature, to prevent the rollback based attacks possible on VMs.
- Simulated the proposed design on Xen Hypervisor kernel.

eXperimental Operating System(XOS)

- Designed a simple OS kernel from scratch with all the basic functionalities of an OS like process scheduling, memory management(virtual memory), interrupts, exceptions and system calls like fork, exec, read, write, open, close, etc.

SIL Compiler

- Designed a Compiler for SIL, a 'C' like language using the LEX and YACC tools. The generated machine code is run on a simulator machine.

Skills

- **Programming Languages:** Java, C/C++
- **Tools:** LEX, YACC, Git, Vim

Publication

1. Shoundic, S, Chandran P, Krishna P, **Reddy V**, Jayachandra B, Pande L. 2016. "Extended-HyperWall: Hardware support for rollback secure virtualization", September. 2016 *International Conference on Advances in Computing, Communications and Informatics (ICACCI).* , Jaipur, India