laman Arora

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ABOUT ME

I am a masters student with special focus on GNU/Linux and systems level programming. Being a passionate developer, I have keen interest in all things Databases, Networking, Operating Systems and Cybersecurity. From peer to peer overlay DHT networks to concurrent RDBMS, I have built systems with maintainable and extensible code-bases and look forward to working with people who love to take on biggest engineering challenges.

♥ SKILLS

Programming/Scripting

*** \mathbf{C} Go C++ **Python** Rust ****

Popular Frameworks and Tools

Docker *** Ghidra *** **GDB** Git

Platforms

GNU/Linux **** Windows *** Android

EDUCATION

University Of Florida Gainesville, USA

August 2019 - May 2021

- Master of Science in Computer and Information Sciences, GPA 3.54/4.00
- Relevent Coursework: "Database System Implementation", "Distributed Operating Systems", "Ethical Hacking and Penetration Testing", "Malware Reverse Engineering", "Blockchain: Optimization and Application"

SRM Institute Of Science and Technology Chennai, India

July 2015 - May 2019

- Bachelor of Technology in Computer Science and Engineering, CGPA 8.3/10.0
- Relevant Coursework: "Network Programming", "Database Management Systems", "Operating Systems"

PUBLICATIONS

A Relay for A SDN Controller

February 2020

- Indian Patent Application No. 202041008146 dated March 06, 2020
- Realtime communication between controllers within distributed SDN

An Attendance System and Method Thereof

December 2018

- Indian Patent Office Journal dated July 27, 2018, page No. 28230
- · System for attendance using facial recognition

</> PROJECTS

Malware Analysis April 2021

• Ghidra, x64_dbg, Python, Radare2

https://github.com/r0ck3r008/malware-analysis

https://github.com/r0ck3r008/database-from-scratch

https://github.com/r0ck3r008/arch-perf-benchmark

- Malware sample analysis reports with Ghidra/Rizin workspaces and memory dumps
- Analyzed Families: Carberp RAT, AveMaria RAT, Ryuk Ransomware and FritzFrog BotNet

DFS: A Database Engine Written from Scratch

April 2020

- Linux, C++, Google Test, flex/yacc
- Database engine tested with processing 1GB or 7,000,000+ records
- · Complete with aggregate, join and select functionalities

A Performance Benchmark of Image Encryption Algorithms

December 2019

- C, Python, Image Encryption, RISC-V, ARM, x86
- Compares simulated RISC-V, ARM and x86 ISA
- · Image encryption benchmark framework for RC4, Chirikov and Vigenere algorithms

Twitter Engine for Highly Concurrent Systems

December 2019

- · Elixir, Phoenix Framework, Websockets
- Distributed and Fault tolerant Twitter Engine tested with 100,000 simultaneous user processes

Tapestry: A P2P Distributed Hash Table Network

November 2019

• Elixir, Tapestry, Distributed Hash Tables

https://github.com/r0ck3r008/tapestry_p2p

https://github.com/r0ck3r008/twitter-engine

- Resilient P2P network capable of connecting 2,000+ clients with reliable resource sharing
- Reliable resource sharing even with 20% failed nodes