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🌐 <https://github.com/r0ck3r008>

👤 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

C	★★★★★	Go	★★★★★
C++	★★★★★	Rust	★★★★★
Python	★★★★★		

Popular Frameworks and Tools

Docker	★★★★★	Ghidra	★★★★★
Git	★★★★★	GDB	★★★★★

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**
- **Relevant 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

Ongoing

- Ghidra, x64_dbg, Python, Radare2
- Malware sample analysis reports with Ghidra/Rizin workspaces and memory dumps
- Currently analyzed sample families: *Carberp (2008)*, *AveMariaRAT (2020)* and *Ryuk (2020)*

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

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

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

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**

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

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**

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

Tapestry: A P2P Distributed Hash Table Network

November 2019

- Elixir, Tapestry, Distributed Hash Tables
- Resilient P2P network capable of **connecting 2,000+ clients with reliable resource sharing**
- Reliable resource sharing even **with 20% failed nodes**

https://github.com/r0ck3r008/tapestry_p2p