

# Ashish Kumar Gahlot

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github.com/Agahlot

Particularly interested in binary analysis, malware analysis, reverse engineering, Windows internals and operating systems. I play CTFs.

## Experience

- Cyber Security Group** **Indian Institute of Technology, Kanpur, India**  
*Vulnerability Assessment of Industrial Control Systems* *May 2017–January 2018*  
I worked on finding vulnerabilities in Industrial Control Systems and SCADA networks that which involved finding vulnerabilities in network protocol as well as software bugs. This involved reverse engineering of network protocol and PLC/RTU firmware.  
This work was done under the guidance and was presented to Prof. Sandeep Kumar Shukla, Head, Department of Computer Science Engineering IIT Kanpur.
- SRISHTI Research Group** **Indian Institute of Technology, Delhi, India**  
*TRACE collection capability* *Dec 2016–January 2017*  
Implemented a port for ARM architecture in Qemu to generate full system execution trace that includes the assembly text of the instructions executed, load/store addresses, branch outcomes, system call, interrupts and privilege level switches in ARM. The collected trace information was initially used in Tejas. The overall idea was to do a behavioral analysis of applications which can be further used for research purposes.

## Personal Projects

- X86 Bare-Bones** *2016–2017*  
Implemented a minimal OS in x86 ASM and C with memory management.
- KVMTOOL | CONTAINERS AND VIRTUALIZATION** *2017*  
kvmtool is based on open source KVM API through which we can invoke virtual CPUs that can be used to run a guest operating system inside our terminal.  
Boot loader is not required for booting the desired operating system. The initial goal is to implement light weight alternative to Qemu.
- CLIENT SERVER NETWORK | NETWORKING, SOCKET** *2015*  
Wrote a fully multithreaded client server model in C using socket programming and POSIX threads.

## Education

### Academic Qualifications.....

- GOVERNMENT ENGINEERING COLLEGE AJMER** **Rajasthan, India**  
*BE, INFORMATION TECHNOLOGY , Expected August 2018* *2014–2018*
- DELHI PUBLIC SCHOOL** **Dadri, UP, India**  
*SENIOR SECONDARY SCHOOL* *2014*

## Technical skills

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- **Programming Languages:** Proficient in: C, C++, Assembly(Intel and ARM) ,Python, TeX.
- **Reversing Skills:** Proficient in: IDA Pro, WinDbg, x64dbg, dnSpy.