Sharwan Ram

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EDUCATION

- **Iowa State University** — Ames, IA
  Visiting Research Scholar; — *May. 2018 – Nov. 2018*

- **Malaviya National Institute of Technology** — Rajasthan, India
  Master of Technology in Computer Engineering; — *Aug. 2016 – May 2018*

- **Rajasthan Technical University** — Rajasthan, India
  Bachelor of Technology in Computer Science; — *Aug. 2011 – June. 2015*

EXPERIENCE

- **EnSoft Corp.** — Ames, IA
  Software Engineer — *Jan. 2019 - Present*

- **Defense Advanced Research Projects Agency (DARPA)** — Arlington County, VA
  Security Analyst — *May 2018 - Jan. 2019*
  - **STAC** : Space/Time Analysis for Cybersecurity (STAC) aims to develop new program analysis techniques and tools for identifying vulnerabilities related to the space and time resource usage behavior of algorithms, specifically, vulnerabilities to algorithmic complexity and side channel attacks. I worked as security analyst in the STAC program.

- **Security Labs** — India
  Teaching Assistant — *Aug. 2016 - May. 2018*
  - **Global Initiative of Academic Networks (GIAN)** : GIAN is a government-initiated program through which many foreign faculty-members taught in India, I led the team which conducted lab sessions and created lab assignments

AWARD AND RECOGNITION

- **Best Challenge Entry Award** — Madrid, Spain
  Challenge Winner — *September 2018*
  - **DySDoc3** : DySDoc3 was the third international workshop on Dynamic Software Documentation held in Spain. It was hosted by the IEEE International Conference on Software Maintenance and Evolution (ICSME 2018). The DySDoc3 workshop hosted the First Software Documentation Generation Challenge and we won the best challenge entry award. We created an automated tool which generates On-Demand Context-Specific Documentation of the given software.

- **Recognition from MIT, Red Hat and Microsoft** — Cambridge, MA
  External Contributor for MIT Kerberos — *Jan 2018*
  - **Security Analysis of MIT Kerberos** : Kerberos is a strong network authentication protocol based on secret-key cryptography. We detected two vulnerabilities (CVE-2018-5709 and CVE-2018-5710) in Kerberos and reported CVEs to MIT, Microsoft and Red Hat where we got recognition.

PROJECTS

- **DynaDoc**: Automated On-Demand Context-Specific Documentation Generator (Research Paper Published).
- **PathCounter**: Utility to count paths in a given program without enumeration which helps to measure the complexity of the software.
- **ICFG Generator**: Utility to generate Inter-Procedural Control Flow Graph using Atlas Platform developed by EnsoftCorp.
- **Identification of Cryptographic Vulnerabilities and Malware Detection**: An automated system which will test android app without any human interference.

EXTRA CURRICULAR ACTIVITIES

- Placement Coordinator at MNIT Rajasthan, India (2016-2018).
- Volunteer to Support an Underprivileged Children.