

MANIKANT SINGH

Second Year Post Graduate

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EXPERIENCE

Application Engineer (Oracle India)

Jul'16 - Jul'19

- Worked closely with product strategy team to timely deliver enhancements.
- Fixed code bugs in the application's backend, frontend and business logic.
- Handled 24x7 high severity customer's critical issues and delivered patch sets and hot fixes.
- Developed, maintained and enhanced automated database restoration tool.
- Managed internal team database server.

RESEARCH

Cyber Security Educational Framework

Aug'20 - Present

M.Tech Thesis | Guide: Prof. Manindra Agrawal

- Currently developing framework to quickly set up virtual environments for cyber security training.
- Auto grade students based on the attack they performed successfully.
- Map attack performed by student with MITRE ATT&CK knowledge base.

COURSE PROJECTS

Secure File System

Aug'19 - Sep'19

Computer System Security | Prof. Pramod Subramanyan

- Designed and implemented a secure file storage to keep files safe on malicious server.
- Designed an architecture of a system to maintain the Confidentiality, Integrity and Availability.

Malware Detection Static and Dynamic Analysis

Feb'20

Malware Analysis and Intrusion Detection | Prof. Sandeep K. Shukla

- Generated static and dynamic analysis report for given software.
- Based on the reports generated devised two machine learning techniques to classify software as Malware or Benign.

Load Balancer

Sep'19

Software Architecture | Prof. T.V. Prabhakar

- Designed and implemented a website to distribute load to different backend servers depending on the type of operations performed.
- Backend servers were created and hosted using Docker.

Web-Security Exploitation

Oct'19

Computer System Security | Prof. Pramod Subramanyan

- Attacked specially designed websites with different security loop holes and security measures.
- Used Cross Site Scripting (XSS), Cross Site Request Forgery(CSRF), SQL Injection exploitation techniques to attack website and gather sensitive information.

Circuit Verifier

Feb'20

Designing Verifiably Secure Systems | Prof. Pramod Subramanyan

- Performed simulation to check if given Integrated Circuit is as per design.
- Performed Tseitin transformation to reduce the equivalent circuit boolean expression to simpler Conjunctive Normal Form(CNF).
- Used SAT solver to prove circuit equivalence provided that only single AND/OR gate has been interchanged.

EDUCATION

🎓 M.Tech. CSE | CPI - 9.0/10

Indian Institute Of Technology Kanpur

📅 July 2019 - Present

🎓 B.Tech. CSE | CPI - 7.22/10

National Institute of Technology Jaipur

📅 July 2012 - May 2016

AISSCE (CBSE) | Percentage - 85.4 %

Kendriya Vidyalaya Patiala

📅 2012

AISSE (CBSE) | CPI - 9.4/10

Kendriya Vidyalaya Patiala

📅 2010

TECHNICAL SKILLS

Languages:

Java C SQL Python
Golang JavaScript Vue.js

Software and Platforms:

Linux SoapUI Postman
SQL Developer Weblogic
SpringBoot REST API

CERTIFICATIONS

🌟 CDT Oracle Database 12c:
Introduction to SQL

🌟 CDT UNIX and Linux Essentials Ed 1

OTHER PROJECTS

Database Restorer (Oracle) 2017-18

- Developed a tool to automate the process of customer database dump restoration.
- Implemented REST API's and Cron Jobs to automatically pickup dump for restoration uploaded on (OCI) Oracle Cloud Infrastructure.

Data Integrity Tool (Oracle)

2019

- Worked on a web portal which detects data discrepancies in the application.
- Implemented the frontend using Vue.js

SCHOLASTIC AWARD

- First Prize In Intra College Competition for website (About Jaipur)