MANIKANT SINGH

Second Year Post Graduate

Manikantsingh +91 8427678444
linkedin.com/in/manikant-singh
manikant@iitk.ac.in manikantsingh54@gmail.com manikant@cse.iitk.ac.in

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.

KEY PROJECTS

Secure File System   Aug'19 - Sep'19

Course: CS628A | 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

Course: CS698M | Prof. Sandeep K. Shukla

- Generated static and dynamic analysis report for given software.
- Applied Random Forest Classifier on statically generated reports and Decision Tree on dynamically generated reports to classify software as malware or benign.
- Static analysis based ML model achieved accuracy ~98 %
- Dynamic analysis based ML model achieved accuracy ~99 %

Load Balancer, Ping & Echo   Sep'19

Course: CS654A | 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.

Database Restorer (Oracle)   2017 - 2018

- 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.

Application Data Integrity Tool (Oracle)   2019

- Worked on a web portal which detects data discrepancies in the application.
- Developed front end using light weight javascript framework Vue.js

Web-Security Exploitation   Oct'19

Course: CS628A | 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 information.

Circuit Verifier   Feb'20

Course: CS675A | 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 Conjuctive Normal Form(CNF).
- Used SAT solver to prove circuit equivalence provided that only single AND/OR gate has been interchanged.

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.

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

`Java` `C` `SQL` `Python` `Golang`
`JavaScript` `Vue.js`

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`SoapUI` `Postman` `Weblogic`
`SQL Developer` `SpringBoot` `REST`

CERTIFICATIONS

- CDT Oracle Database 12c:Introduction to SQL
- CDT UNIX and Linux Essentials Ed 1

SCHOLASTIC ACHIEVEMENTS

- Won first prize in an intra-college website designing competition. Website is hosted on MNIT portal (About Jaipur)

SELF PROJECT

Mnit Room   2013

- Developed PHP based chatting platform for smaller groups and communities.
- Application allows user to add friends, share posts, search users and chat with friends