Vaibhav Bedi

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Date of Birth: 14th September 1995

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**Area of Interest**

* Internet of Things
* Embedded System
* Penetration Testing
* Reverse Engineering
* Cyber Security

**Profile Summary**

* Overall 2.8 years of experience in Embedded System, Internet of Things, Medical devices and cyber security.
* 7 months experience as a Research Staff.
* Experience in decoding the modulation signal using GNU Radio, Audacity and Inspectrum.
* Hands on experience with extracting firmware, JTAG exploitation, SPI, I2C, and UART.
* Delivered the talks in various open source communities like NULL Bangalore, c0c0n kerala, Red Team Security Summit, OWASP and Test Tribe.
* Love to spend most of my free time in making, breaking and securing IoT devices.

**Work Experience**

**Singapore University of Design & Technology** | Research Assistant

Jan 2020 – Present | Singapore, 520826

* Framework Development
* Bluetooth Exploitation

**Deloitte Touche Tohmatsu** | Consultant

September 2019 – December 2019 | Bangalore, India

* Application Security Testing
* IoT security Testing
* Wi-Fi Fuzzing
* Hardware Security Testing

**L & T Technology Services** | Security Engineer

Jan 2019 – September 2019 | Bangalore, India

* Application Security

**Attify Mobile Security Pvt Ltd** | IoT Security Researcher

May 2018 – Nov 2018 | Bangalore, India

* Generated some of the modulation types to send data from Arduino Nano, and then receive it using GNU radio and Gqrx to decode it to the original data.

**Tools Used** – Arduino nano, Gqrx, Hack RF, GNU Radio-companion, Inspectrum, Audacity

* Has extensive experience in using BTLEjuice for the security of BLE Smart Bulb.
* Used Attify Badge to explore JTAG and extract the firmware of various IoT devices.

**Tools & Technologies hands-on with**:-

Bluetooth tool – Hcitool, Gatttool, characteristics, Services, Bleah, Bluetooth HCI snoop log.

**Contribution**

* Performed various attacks on IoT Smart Devices.

## Indian Institute of Technology, Mandi | Project Associate (IMPRINT Project)

June 2017 – May 2018 | Himachal Pradesh, India

## A micro fluidic-based point of care testing device for measuring urine albumin using a novel organic dye

## Indian Institute of Technology, Indore | Research Staff (Newton Bhabha Programme)

June 2016 – Feb 2017 | Madhya Pradesh, India

* Developing a social network of industrial assets to enable smart decision making.
* Design a Social Network based system of 3D Printer Machine for generalized group-based communication between industrial assets.

**Key Skills**

* C ,Python
* Environment –Linux,windows,Git
* Open Source Tools – Brupsuite, Wireshark, Nmap
* Development Board – AVR(Atmega8), Arduino, Esp8266

Raspberry Pi

* Protocols-MQTT,TCP,HTTP,HTPS,Zigbee

**Technologies Expertise**

* Radio Waves Hacking
* Firmware Analysis
* BLE(Bluetooth Low Energy) Exploitation
* Vulnerability Assessments
* Hardware Hacking
* Web Security

**Internship**

**Cutting Edge Medical Devices Pvt Ltd, Delhi**

**Project**

* IR based optoelectronic device for measuring displacement

and timer Circuits.

**Department of Science & Technology, Delhi**

**Project**

* Monitoring the health of UAV in Ground Computer using

Mission Planner.

**Education**

* **Kurukshetra University – 2017:**

B.Tech in Electronics & Communication

CGPA score – 7.0

* **Senior Secondary – 2013:**

UPMSP board with score 83%

* **Secondary – 2011:**

UPMSP board with score 74.9%

**Patent**

A system for detecting the biological molecule using the micro fluidic technique.

**Application number:** 201811047739

**Submit Date**: 17/12/2018

**Status**: Pending

**Achievements**

* Speaker at Red Team Cyber Security Summit 2019,kerala.
* Speaker at IoT Show 2019.
* Demonstrated Industry Smart ware Project in IMTEX 2017-Machine Tool Exhibition, Bangalore.
* Won a National Technical Institutes Competition Smart Manufacturing-Industry Smart-ware At Manufacturing Today Conference & Awards 2016 organizes by ADITYA BIRLA GROUP.

* Secured 1st position in LIVE-Project competition on the occasion of “TechInvent2k16” at Chandigarh Group of College, Landran.

* Secured 2nd position in Circuit-Mania competition on the occasion of “TechInvent2K16” at JMIT Radaur.

* Secured 2nd position in RAM-ROM competition on the occasion of “TechInvent2K16” at JMIT Radaur.

* Secured 1st position in Business Plan Competition conducted by Entrepreneurship Development Cell at JMIT Radaur.
* Secured 3rd position in Project Exhibition competition on the occasion of “SwarooMM-2017 organized by Maharishi Markandeshwar University Ambala.
* Demonstrated project in Industrial Exhibition on the occasion of “TechInvent2017” organized by Chandigarh University.