VaibhavBedi
Mobile No: +65-85997279
Date of Birth: 14th September 1995
Email: Rob.vaibhavbedi@gmail.com

Correspondence Address
Block 826 Unit no 02-86,
Street 81 Tampines
Singapore, 520826

Profile Summary

- Almost 2.4 years of experience in Embedded System, Internet of Things, Medical devices and cyber security.
- Extensively worked on performing the penetration testing on various IT products and applications like BLE based smart bulb, Home automation based switch, Cough Assist medical device, Smart connected TV application and Esp8266 Wi-Fi chip.
- Expertise in application security assessment, IoT security Testing, Bluetooth and Wi-Fi fuzzing, firmware analysis, and Hardware Security testing.
- Expertise in performing the attack surface mapping on the IT products and analyze the components.
- 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.
- Strong analytical and troubleshooting skills.

Area of Interest

- ✓ Internet of Things
- ✓ Embedded System
- ✓ Penetration Testing
- ✓ Reverse Engineering
- ✓ Cyber Security

Work Experience

Singapore University of Design & Technology | Research Assistant
Jan 2020 – Present | Singapore, 520826 **(Contract Position)**
- Framework Development
- Bluetooth Exploitation

L & T Technology Services | Security Engineer
Jan 2019 – September 2019 | Bangalore, India
- Application Security
- IoT security Testing
- Wi-Fi Fuzzing
- Hardware Security Testing

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 **(Contract Position)**

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

Technologies Expertise

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

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

Internship

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

June 2016 – Sep 2017 | Madhya Pradesh, India

- Developing a social network of industrial assets to enable smart decision making.

Cutting Edge Medical Devices Pvt Ltd, Delhi

Jan 2016 – Feb 2017 | Delhi, India

- IR based optoelectronic device for measuring displacement and timer Circuits.

Department of Science & Technology, Delhi

June 2015 – Aug 2015 | Delhi, India

- 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.