Abhimanyu Rawat

https://ABresting.github.io/

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EDUCATION

Pompeu Fabra University
Barcelona, Spain
Ph.D. in Distributed Systems and Security; Marie Curie Fellowship, EU H2020
Oct. 2019 – Present

Birla Institute of Technology and Science
Pilani, India
Masters of Engineering in Computer Science
Aug. 2015– July. 2017

Maharshi Dayanand University
Rohtak, India
Bachelors of Technology in Computer Science
Aug. 2009– July. 2013

EXPERIENCE

Nokia Bell Labs
Paris, France
Research Intern, Blockchain Security Group
Oct 2019 - Present

- **Blockchain Security**: Blockchain Security project related to the IoT devices running on propriety blockchain solution.
- **Lightweight Protocols**: Making resource intensive blockchain solution resource efficient for a plethora of usecases.

Linkoping University
Linkoping, Sweden
Research Assistant, under Prof. Andrei Gurtov
Feb 2019 - Aug 2019

- **Decentralized Systems**: Systems where one or more components are decentralized to avoid the single point of failure.
- **Profiling IoT**: Profiling of the IoT devices connected and reachable via the internet using tools such as Shodan and labelling the observation according to the known vulnerabilities.
- **IoT Risk Assessment**: IoT devices deployed in legacy systems and mission critical domains could expose greater risk if they are using vulnerable or unpatched protocols.

EMC^2(Now DellEMC)
Pune, India
Software Engineer, Protocols Group(SMB)
Jul 2017 - Jan 2019

- **NAS box**: Network-attached storage(NAS) is a file-level computer data storage server connected to a computer network providing data access to a heterogeneous group of clients.
- **SMB/CIFS Protocol**: A communication protocol for providing shared access to files, printers, and serial ports between nodes on a network, widely used with Windows products.
- **CIFS RFC Features**: Developing Features which are made part of the CIFS/SMB related RFCs. Bypassing the open-source code and developing in-house protocols features.
- **Agile Development**: Agile practices involve discovering requirements and developing solutions through the collaborative effort of self-organizing and cross-functional teams and their customer/end user.

Google Summer of code(GSoC)
Remote
Student Collaborator
May 2017 - Jul 2017

- **HPX**: HPX is a C++ Standard Library for Concurrency and Parallelism. It implements all of the corresponding facilities as defined by the C++ Standard.
- **Stack Overflow detection**: A stack overflow error can occur in a computer program due to excessive memory usage. Stack overflow is general error in linux, which could be cause by segmentation fault also.

EMC^2(Now DellEMC)
Pune, India
Software Engineering Intern, DDOS Group
Jan 2017 - Jun 2017

- **DD OS**: The Data Domain Operating System (DD OS) is the intelligence that powers Dell EMC Data Domain boxes used for data backup, archive and long term retention.
- **Services Debugger**: To avoid setup issues, service debugger checks the client side setup and software configurations for smooth operations.
- **Central Configurator**: A program which monitors each and every service(bounded by existing rules) if they are setup and configured correctly. A security layer working in conjunction makes the product resist of manual errors and network attacks.

- **Navayuga Info. Spatial**   New Delhi, India
  Application Development Intern   *Summer 2013*
    - ○ **Hybrid Application**: Hybrid apps are deployed in a native container that uses a mobile WebView object. When the app is used, this object displays web content thanks to the use of web technologies (CSS, JavaScript, HTML, HTML5).
    - ○ **E-commerce inventory**: E-commerce inventory management is the act of measuring the amount, location, pricing, and mix of products available from your business. Through e-commerce inventory management, businesses know what products are overstocked, in stock, understocked, and out of stock

PUBLICATIONS

1. Abhimanyu Rawat, Mohammad Khodari, Mikael Asplund, and Andrei Gurtov, Decentralized firmware attestation for in-vehicle networks, ACM Trans. Cyber-Phys. Syst. **5**, 10.1145/3418685 (2021).
2. D. Hasselquist, A. Rawat, and A. Gurtov, Trends and detection avoidance of internet-connected industrial control systems, IEEE Access **7**, 155504–155512 (2019).
3. A. H. Sodhro, M. S.Obaidat, S. Pirbhulal, G. H. Sodhro, N. Zahid, and A. Rawat, A novel energy optimization approach for artificial intelligence-enabled massive internet of things, in *2019 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)* (2019) pp. 1–6.
4. Mohammed Khodari, Abhimanyu Rawat, Mikael Asplund, and Andrei Gurtov, Decentralized firmware attestation for in-vehicle networks, in *Proceedings of the 5th on Cyber-Physical System Security Workshop*, CPSS '19 (Association for Computing Machinery, New York, NY, USA, 2019) p. 47–56.
5. Nitya Kanuri, P. Arora, S. tallaru, Bona Collaco, Rohan Dutta, Abhimanyu Rawat, Munivenkatappa Manjula, Michelle Newman, and s Cho, Examining the initial usability, acceptability and feasibility of a digital mental health intervention for college students in india., International Journal of Psychology (2019).

AWARDS AND ACHIEVEMENTS

- **Winner IC3 Blockchain Camp**: 1st Prize IC3 Blockchain Camp 2020(July-Aug) hosted by IC3 and Cornell University
- **Winner IMDEA Hackathon**: Blockchain Hackathon at IMDEA Software Institute in Madrid, Feb. 2020
- **Winner Copernicus Hackathon**: Student prize at Copernicus Hackathon held at Science Park in Graz on 15-16 Oct., 2020
- **Academic achievement**: Stood in top 40 students among 10000 students appeared for BITSAT-HD, Merit Scholarship cum. 40% Fee Wavier at BITS Pilani, National Eligibility Test (NET-exam) qualified in first attempt, GATE exam qualified, 3rd position in Codility Titanium 2016 Challenge, Semifinalist in HackerRank University World Cup 2015
- **Others**: Reported bug in payment process platform ccavenue(discrepancy with payment module), winner of few college level technical events

PROGRAMMING SKILLS

- **Languages**: **Proficient in**: C, C++, Python, Solidity, Git, bash, TeX   **Basic to Moderate ability in**: Lisp, Java, JS, R

- **Industry Software Skills:**: Wireshark, mininet, ns-2, Omnet++, Django, Flask, Android SDK, MySQL MongoDB, Docker, Raspberry Pi and more

EXTRA-CURRICULAR AND INTERESTS

- Certified Scrum Master, by Scrum Alliance Certificate ID 000837249

- Fast Sudoku and Rubik's cube solving, flying glider planes, avid reader, into board-games, culinarian.

REFERENCES

Available on Request