

Rahul Isola



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Education

University of North Carolina at Charlotte (2013)
Master of Science, Computer Science

DBIT, Mumbai University (2012)
Bachelor of Engineering, Mechanical Engineering

Skills

Programming C#, .NET, Python, Java, Android, C++, Embedded (Arduino), Tizen

Web Dev HTML, CSS, JS, jQuery, Bootstrap, ASP.NET, AJAX, Web Services,
Python / Django PHP, JSP, Servlets, Node.JS

Database MS SQL, SSIS/SSDT, MySQL, MongoDB, IBM DB2, PostgreSQL

Others NAC (Network Access Controls), Automation of various Cisco IOS & F5 LTM / ASM functionalities
Splunk, MatLAB, Linux, Apache, Eclipse, SNMP, GIT, Jenkins (familiarity)

ORACLE®

Certified Professional

Java SE 6 Programmer

Work Experience

Bank of America, Global information Security (GIS)

(25+ patents granted)

Vice President; Information Security Engineer

(Feb 2014 - Present)

Description: Part of the Network Security team within the 'Cyber Security Technology' - Engineering group in GIS. Roles include being the technical lead and SME for multiple projects, coming up with & implementing ideas for automation, process and tool enhancements for enhancing the cyber security controls at the bank. **Projects:** F5 Application Security Module (ASM) Layer-7 Web Application Firewall management automation, Network access controls design & deployment – Layer 2 network / endpoint controls, Switch / Router configuration deployment automation, MAC cloning detection. Design and automate the Enhanced Cyber GeoSecurity Controls program for better security and endpoint monitoring for travellers to High-Risk regions, oversee deployment of security enhancements to protect the enterprise network, company-owned hosts & DMZs worldwide.

Patents: Instant device disconnection tool – wired and wireless rogue device tracking, MAC cloning and other network security enhancements for the 'Network Access Monitoring' Team (US9628480B2, US9736152B1, US9553891B2 and other filings), Secure Traveler Framework - Enhanced Cyber GeoSecurity Controls Automation (US20170017796A1) – Among top 5 inventors in 2018 enterprise-wide

University of North Carolina at Charlotte

Technical Specialist - Application Dev.

(Aug 2012 – Dec 2013)

Student Developer for the College of Engineering (CoE) Department (Mosaic Computing Group) Development activities included designing and developing high visibility and scalable live applications on multiple platforms to be used by students, faculty and researchers. Applications– **Web Apps:** Develop APIs, Ticketing System, Online multiple labs workstation status monitoring and remote connectivity solution, **Java + Web Apps:** Remote server/workstation connectivity and SSH tunnelling for Researchers for secure connection from their personal machines, System Health Monitor for remote status monitoring, timed token renewal, 2-way messaging and support for all PCs, managing users, tokens, plotters etc in CoE labs.

Freelancing Developer / Consultant

(Aug 2009 – Mar 2012)

Freelance Web/Application Designer and Developer, Self Employed, Consultant for Croadz Designs etc.

Research Experience (Bank of America)

25+ patents filed, approved and granted, more in the pipeline

Among top 5 inventors in Bank of America enterprise-wide (2018)

<https://patents.google.com/?inventor=Rahul+Isola&num=100>

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List of Patents / Projects

These are actively helping the Bank to protect & enhance our entire enterprise network security controls and provides our various information security teams the ability to instantly and surgically contain any security risks from any devices on any of our networks (wired / wireless / virtual). These were filed to preserve the competitive advantage and to maintain the leadership position that Bank of America has when it comes to the security controls of any enterprise. Most of these are already approved, with more in the pipeline.

Multiple patents ideas successfully built into products, deployed & in-use worldwide, including:

- **On-demand / automated instant rogue device disconnection tool - network security enhancement for Network Access Monitoring Team:** Currently used in production worldwide on Bank of America network to automatically detect and take action to block unknown / rogue devices from the production network without any human intervention required, and unblock upon successful validation
- **On-demand / automated instant rogue device isolation, quarantine & monitoring - Network security enhancement for the Network Access Monitoring Team:** Currently deployed in production at Bank of America to allow security teams to quarantine rogue devices without directly interacting with them to allow investigation teams to investigate the device while keeping the network safe at the same time
- **Device Spoofing Detection:** Currently deployed in production at Bank of America to alert the security teams, and have the option to instantly and automatically detect and block the attempts of any rogue actor spoofing the MAC address of a rogue device to mimic that of a known device to gain unauthorized access to the network.
- **Zone-based network device monitoring using a distributed wireless network:** Mining wireless scanning, access and transmission logs to identify, triangulate and locate known and unknown / rogue / lost / stolen devices anywhere within the reach of our wireless network
- **Secure Traveller Framework - Enhanced Cyber GeoSecurity Controls Automation:** Currently deployed in production to educate and protect the data present on the devices of employees travelling to high information-security risk destinations worldwide

Prior Research Experience (DBIT / CSRE, IIT Bombay)

Automated Differential Diagnosis in Medical Systems

(Publications: 1 Journal + 2 Conference Papers)

- Knowledge Discovery in Medical Systems Using Differential Diagnosis, LAMSTAR & k-NN, IEEE Transactions on Information Technology in Biomedicine (*Journal Paper*)
- *MediQuery – An automated Medical Decision Support System*, 24th International Symposium on Computer Based Medical Systems (CBMS) 2011 (*Conference Paper*)
- *Automated Differential Diagnosis in Medical Systems using Neural Networks, kNN and SOM*, Developments in e-Systems Engineering (DeSE'2011) (*Conference Paper*)
- Medical Diagnosis via Communication Networks (India 3515/MUM/2012) (*Patent application*)

Geo-ICT and sensor Network based Decision Support Systems in Agriculture and Environment Assessment (Indo-Japan bilateral Collaborative project)

Google Scholar Link <https://scholar.google.com/citations?user=SiUKA9sAAAAJ&hl=en>