

Seyed Bagher Hashemi Natanzi | Curriculum of Vitae

Ph.D. Student
Electrical and Computer Engineering
Worcester Polytechnic Institute
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Summary

I'm a Ph.D. student at the Department of Electrical and Computer Engineering at Worcester Polytechnic Institute. I have a master's degree in Information technology – Computer networking and seven years of experience working as a Data Scientist, Data Analysis, Revenue Assurance Specialist, RF Planning, and Network Performance Engineer in Operator and vendor Companies.

Research Overview

My research broadly lies at the intersection of AI and O-RAN in the NextG Telecommunication networks (5G,6G, and Beyond). I aim to improve the performance and profitability of O-RAN in 5G and 6G ecosystems through data-driven and AI Base approaches and practical deployment.

Education

Worcester Polytechnic Institute <i>PhD Electrical and Computer Engineering, Supervised By Prof. Bo Tang</i>	Worcester, U.S. <i>2023–Present</i>
Azad University of Pardis <i>M.Sc. Information Technology, Computer Networking , Supervised By Prof Mo Majma</i>	Tehran, Iran <i>2014–2017</i>
Azad University of Najafabad <i>B.Sc. Software Engineering</i>	Esfahan, Iran <i>2007–2012</i>

Honors & Awards

- Worcester Polytechnic Institute Full Funded Ph.D. Scholarships 2023
- Mississippi State University Full Funded Ph.D. Scholarships 2022
- University College Dublin Full Funded Ph.D. Scholarships 2022
- MTNlranCell Innovation Special Award winner in 2021 (2nd rank)
- MTNlranCell Innovation Special Award winner in 2020 (4th rank)
- Yellow rise performer prize in MTNIRANCELL (2020)
- Outstanding Engineer in the IT Department of Huawei Company (2016)

Publications

- O-RAN Performance Analyzer with Sample-Collector xApp: Platform Design, Development, and Deployment (Submitted)
- Secure Northbound Interface for SDN Applications with NTRU Public Key Infrastructure
- Secure Distributed Controllers in SDN with ECC Public Key Infrastructure
- The infrastructure of data centres for transferring big data traffic: A survey research

Academic & Professional Experience

MTN IRANCELL, Tehran, Iran, January 2018 to March 2022

- Data Scientist - Data Analyst - Revenue Assurance Specialist (RA)

Expert in Data Science and Machine Learning for managing call details records (CDRx) in the Network, Marketing and Finance telecom domains. Strong contribution to Marketing and ITS digital projects to cover technical issues, protect revenue streams and detect revenue loss through proactive control design.

Telecom Company, Tehran, Iran, March 2015 to January 2018

- RF Optimization Engineer - Network Performance Engineer

Network performance Optimization in cellular Technology 2G, 3G, 4G – Site Planning project - KPI analysis for region Seven (Tehran) to achieve more coverage and throughput in 4G Network

Technical Skills

. In the Telecom field:

- I was in charge of IT & RF engineer in Huawei Company; I know the concept and 3 years of working experience with broadband Network domain such as:
2G/ 3G/ LTE/ Microwave / Transmission / RAN / CORE
- Expert in HUAWEI Special software such as U2000, NASTAR, OMSTAR, Actix, TEMS, Idart, Atoll
- I was in charge of Data Scientist – Data Analyst – Revenue Assurance Specialist position and have 4 years' experience working with SQL server, Oracle, Linux, Knime, SSIS, Python, Toad

In Software engineering:

- Database (SQL, Oracle)
- Service architect Based on Angular JS and Ionic (build SaaS model)
- Test-driven software development, agile software project management, code management such as Git, etc
- Knowledge of system architecture design, software design patterns, Web design
Matlab (beginner), Cloudsim, NS2 (beginner), MININET (beginner)

In-Network field:

- Software-Defined Networking (Open Flow, Floodlight,) and NFV Concept Cloud Service Design (SAAS, PAAS, IAAS)
OpenStack, VMware ESX Virtualization
Hosting services by Linux (cPanel, Direct admin)
Network maintenance (Switch, Routers, Windows Server Configurations) Launching Network services: DNS, Email, firewall, etc.
Protocols include TCP/IP, UDP, ICMP, DNS, etc.

Standard Tests

. TOEFL-IBT (Total: 101, Reading: 29, Listening: 23, Speaking: 21, Writing: 28)