ALI KRAYANI

[redacted]

WORK EXPERIENCE

Software Engineer
Everteam [01/2018 – 08/2018]

Address: (Lebanon)

- Java EE (J2EE) developer
- Design, implement and maintain java application phases
- writing and testing code, refining and rewriting it as necessary
- developing existing programs by analysing and identifying areas for modification
- integrating existing software products and getting incompatible platforms to work together
- maintaining systems by monitoring and correcting software defects

Radio Access Network (RAN) Optimizer - Internship
DINFO LAB at University of Florence [10/2016 – 06/2017]

Address: Florence (Italy)

- Understanding all Cellular Networks Architecture GSM (2G), UMTS (3G), LTE, LTE-Advanced (4G) and LTE-Pro.
- Studying the market of Internet of Things IoT and the technologies that will be suitable to support this type of communications (known as Machine Type Communications and IoT applications); non 3GPP technologies are: LoRa, SigFox and others; 3GPP technologies are: EC-GSM, NB-IoT and LTE-M.
- Increase the overall performance of the cell in a cellular network that support a massive number of devices that lead to congestion working with the physical layer (L1) and data link layer (L2).
- We proposed a system model to optimize the Radio Access Network increasing the Access Rate and decreasing collisions and delay.
- We proposed a method for controlling the traffic load to overcome congestion and ensure the load balance.
- Our proposed system model is validated and verified by simulation results.

Software Architect and Developer - Internship
Alfa Soft [03/2014 – 08/2014]

Address: Turin (Italy)

- Front-end Web application programming with html, CSS, JavaScript
- Back-end Web application programming with Java and C++
- Database Developer

Private Tutor
[10/2011 – 02/2014]

Address: Turin (Italy)

Provided tutoring assistance to university students studying Telecommunications and Computer engineering. Helping them with their specific subjects that I already did and understood such as:
- Mathematical Analysis II
- Computer Sciences
- Computer Programming
- Signal theory
- Digital Signal Processing
- Object Oriented Programming (Java)
- Data Network Protocols

EDUCATION AND TRAINING

PhD in Interactive and Cognitive Environments
University of Genoa [11/2018 – Current]

Address: Genoa (Italy)

Master's Degree in Telecommunication Engineering
University of Florence [2017]

Address: Florence (Italy)

final grade 107/110

Bachelor Degree in Telecommunication Engineering
Politecnico di Torino [2014]

Address: Turin (Italy)

LANGUAGE SKILLS

Mother tongue(s):

Arabic

Italian

LISTENING: C2 **READING:** C2 **WRITING:** C2

SPOKEN PRODUCTION: C2

SPOKEN INTERACTION: C2

English

LISTENING: C2 **READING:** C2 **WRITING:** C2

SPOKEN PRODUCTION: C2

SPOKEN INTERACTION: C2

PUBLICATIONS

Publications

A. Krayani, M. Baydoun, L. Marcenaro, A. Alam, and C. Regazzoni. Self Learning Bayesian Generative Models for Jammer Detection in Cognitive-UAV-Radios. In 2020 IEEE Global Communications Conference, Taipei, Taiwan, December 2020.

A. Toma, **A. Krayani**, M. Farrukh, H. Qi, L. Marcenaro, Y. Gao, and C. S. Regazzoni. AI-Based Abnormality Detection at the PHY-Layer of Cognitive Radio by Learning Generative Models. IEEE Transactions on Cognitive Communications and Networking, 6(1):21-34, 2020.

A. Krayani, M. Baydoun, L. Marcenaro, Y. Gao, and C. S. Regazzoni. Smart Jammer Detection for Self-Aware Cognitive UAV Radios. In 2020 IEEE 31st Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'20), London, United Kingdom, August 2020.

A. Toma, **A. Krayani**, L. Marcenaro, Y. Gao, and C. Regazzoni. Deep Learning for Spectrum Anomaly Detection in Cognitive mmWave Radios. In 2020 IEEE 31st Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'20), London, United Kingdom, August 2020.

A. Krayani, M. Farrukh, M. Baydoun, L. Marcenaro, Y. Gao, and C. S.Regazzoni. Jammer detection in M-QAM-OFDM by learning a Dynamic Bayesian Model for the Cognitive Radio. In 2019 27th European Signal Processing Conference (EUSIPCO), pages 1-5, 2019.

M. Farrukh, **A. Krayani**, M. Baydoun, L. Marcenaro, Y. Gao, and C. S. Regazzoni. Learning a Switching Bayesian Model for Jammer Detection in the Cognitive-Radio-Based Internet of Things. In 2019 IEEE 5th World Forum on Internet of Things (WF-IoT), pages 380-385, 2019.

OTHER SKILLS

Other skills

Strong knowledge of :

- ATM, LAN/WAN, VLANs and data networking.
- IP Addressing, Subnetting and Internet Protocols as TCP/IP, ARP, ICMP, TCP, UDP, FTP, TFTP and VOIP.
- Static and dynamic routing protocols (RIP, IGRP, EIGRP, OSPF,ISIS, BGP)
- MPLS networking.
- Firewalls
- ADSL, xDSL, Fiber Optics
- Low Power Wide Area Networks LPWAN
- Device-to-device (D2D) communications
- Vehicle-to-vehicle (V2V) communications
- Machine-to-machine (M2M) communications
- Cellular Systems (2G, 3G, 4G, 5G)
- Unmanned Aerial Vehicles (UAVs) Communications
- Cognitive Radios
- Machine Learning