Lydia AIT OUCHEGGOU
Guest Researcher at NIST

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Organized and motivated, I am a fast learner with critical thinking and have strong communication and collaboration skills, and I am also certified CICSO 1 & 2.

WORK EXPERIENCE

Guest Researcher
National Institute of Standards and Technology (NIST)
10/2021 - Present   *Maryland, USA*

Internship on placing data in storage and cache in fog infrastructure
Inria Rennes & Lab-STICC ENSTA Brittany
03/2021 - 09/2021   *Brest, France*
- Implementation of a policy for placing IoT data in storage and stream data in cache in fog infrastructure.

Web Developer
AL SALAM Bank
09/2019 - 10/2019   *Algiers, Algeria*
- There was two of us, and we implemented a web portal within AL SALAM bank so that the employees could view, change and upload the protocols of the bank.

PROJECTS

SoC project for the detection of the execution timeout.
- Development of a hardware monitor that records the time for each job of processor occupation in VHDL under Vivado.

Combinatorial optimization project
- Implementation of three heuristics to resolve the knapsack problem with python.

Military fleet management project
- Conception and implementation of Data collection and transmission secured systems, from fleet's vehicles to the park's database (incl. speed, distance travelled) using python, C++ and PostgreSQL. I had to deal with the security aspect of the systems by adjusting existing protocols (HMAC, handshake, ...).

Advanced networks
- Implementation of a QoS-based flow control system over VPN / MPLS on GNS3. I had a lot of roles in this project, like setting up the file and streaming servers.

High Performance Computing Project (HPC)
- Build a mini-cluster and analyzed parallel programming performance using C.

EDUCATION

University of Western Brittany - UBO
Master 2 in Embedded Systems (Honors, Rank 2)
09/2020 - 09/2021   *Brest, France*

Ecole Superieure d'Informatique - ESI
Computer science engineer (High Honors)
09/2016 - 10/2021   *Algiers, Algeria*

Mustapha BEN BOULAID High School
Baccalaureate, mathematical series (High Honors)
2016   *Tizi-Ouzou, Algeria*

SKILLS

Programming: PHP, HTML, CSS, VHDL, AADL, Java, C, Python, OpenMP, MPI/OpenMPI, CUDA, JavaCC, Lex, Assembler

Data science: Machine Learning, Deep Learning, Jupyter, Python (Skitlearn, numpy, pandas, libvirt)

Virtualization: VMWare, VirtualBox, QEMU

Network: VLAN, Trunk, VTP, inter VLAN connectivity, Spanning tree, Etherchannel, IPv4, IPv6, BGP, OSPF, EIGRP, RIP, DNS, DHCP, NTP, NAT, QoS, MPLS, VRF

Security: Cryptography, ACL, VPN, Firewall

SGBD: Oracle, MySQL, NoSQL, MangoDB, PhpMyAdmin

Project management: Gantt, MSProject, Trello, GitHub

Soft skills: MS Office, Public speaking

Simulators et IDEs: VIVADO, Arduino IDE, AADL Inspector, Android Studio, GNS3, Packet Tracer, Wireshark, Scyther

ACHIEVEMENTS

Article review 2021
I have reviewed two articles during my Master 2 internship in France: 1) AdaSens: Adaptive Environment Monitoring by Coordinating Intermittently Powered Sensors. 2) Placement of IoT services in fog environment based on complex network features: a genetic-based approach.

Hack UPC Barcelona 2019 (10/2019)
The Largest hackathon in Europe. Collaboratively worked on building an Application aimed to randomly match users based on conversation topics (mathematics, literature ...).

CERTIFICATES

CISCO CCNA Routing and Switching (CCNA2)

CISCO CCNA Networking Basics (CCNA1)

LANGUAGES

English
Advanced

French
Fluent

Arabic
Fluent

Tamazight
Native