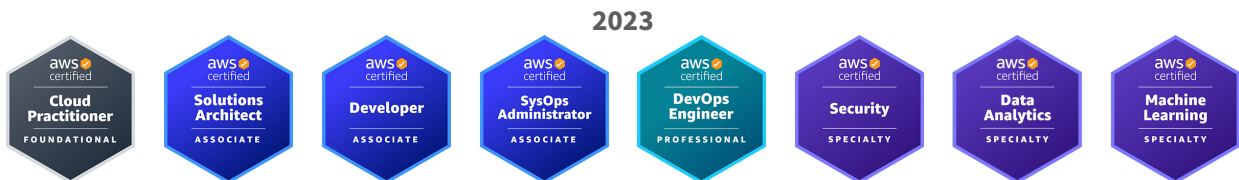


Skills

OS	GNU/Linux, OS X, Microsoft Windows, Android.
AI	Tensorflow, Keras, PyTorch, Spark.
Blockchain	Solidity, EVM, Truffle, Hardhat.
Cloud	Amazon Web Service (AWS), Google Cloud Platform (GCP), Digital Ocean, Microsoft Azure, OVH.
IaC	Cloudformation/CDK, Terraform.
Containers	Docker, Podman, LXC, Kubernetes, Openshift/OKD.
Programming Languages	C, C++, Golang, Java, Kotlin, Python, Typescript, Dart, PHP, JavaScript, Node.js, .Net.
DBMS	MySQL/MariaDB, SQLite, PostgreSQL, Oracle Database, MongoDB, Redis.
Frameworks/Libraries	Flutter, Angular, Spring Framework, Qt, GTK.
VCS	Git, SVN
Human Languages	French, English, Arabic

Active Certifications



Publications

- 2024 **Demdah, K. M., Ben Cheikh, T. L., Loued, W. B., Taheri, S., Marseille, A. and Peters, J.** (2024). Graph Neural Network-based Approach to Geo-locate Assets from Sketch maps. International Conference Proceedings Series by ACM (ISBN : 979-8-4007-1624-9) - ICGDA 2024
- 2017 **Loued, W. B., Porcher, A., Lieb, L., Pigot, H., Lorrain, D., Guerin, C. and Chauvin, C.** (2017). Amelis : intégration d'un agent virtuel pour faciliter l'interaction avec un calendrier interactif. Paris, CHT'17 Challenge Handicap & Technologies 2017. France
- 2017 **Porcher, A., Loued, W. B., Pigot, H., Lorrain, D., Guerin, C., and Chauvin, C.** (2017). Conception participative et interdisciplinaire d'un agent virtuel émotionnel pour une technologie destinée aux aînés. 9ème colloque EPIQUE 2017, L'Ergonomie des technologies pour le développement des compétences, Dijon, France. Actes du 9ème Congrès de Psychologie Ergonomique EPIQUE 2017.
- 2017 **Lieb, L., Loued, W. B., Porcher, A., and Pigot, H.** (2017). Attente des aînés lors d'interactions avec un agent virtuel. Angers, 3ème congrès annuel Technologies et Usages du CENTICH. France
- 2016 **Porcher, A., Loued, W. B., Lieb, L., Pigot, H., Lorrain, D., Guerin, C., and Chauvin, C.** (2016). Projet de conception participative du calendrier Amelis : Placer les aînés au cœur de la conception technologique. Congrès Age 3.0.
- 2016 **Pigot, H., Porcher, A., Loued, W. B., Lieb, L., Lorrain, D., Guerin, C., and Chauvin, C.** (2016). ACG2016 : Favoriser l'innovation en recherche sur le vieillissement / CAG2016 : Fostering Innovation in Research on Aging, Montréal, 45e Réunion scientifique et éducative annuelle/45th Annual Scientific and Educational Meeting of the CAG.
- 2016 **Loued, W. B., Porcher, A., Lieb, L., Pigot, H., Lorrain, D., Chauvin, C., and Guerin, C.** (2016). Amelis : concevoir un agent virtuel expressif intégré à un calendrier interactif pour des aînés. WACAI, Brest.
- 2016 **Loued, W. B., and Pigot, H.** (2016). Emotional Virtual Agent to Improve Ageing in Place with Technology. In Proceedings of the 6th International Conference on Digital Health Conference (DH '16). ACM, New York, NY, USA, 169-170. DOI=<http://dx.doi.org/10.1145/2896338.2896368>

Professional Experience

Amazon Web Services, Inc.

CLOUD APPLICATION ARCHITECT

Montréal, Canada

October 2022 - Today

- Develop customers solutions.
- Create and deploy **modern data architectures**.
- Conduct workshops about **Data and AI**.
- Create **GenAI** prototypes.
- Create CDK/Cloudformation and Terraform IaC.

Heyday by Hootsuite

AI TEAM LEAD / RESEARCHER

Montréal, Canada

May 2022 - October 2022

- **Manage AI Team and NLP projects.**
- Train GPT Models.

Olameter Inc.

AI LEAD / RESEARCHER / DATA SCIENTIST

Montréal, Canada

September 2019 - May 2022

- **Manage AI Team and projects.**
- Collect and analyze data.
- Experiment and develop deep learning architectures for image recognition and **object detection** (EfficientDet, Mask-RCNN, Mobilenet, Faster-RCNN, Bonnet, etc).
- Create models for time sequence analysis.
- Experiment and develop generative models for image denoising.
- Create Android services with integrated deep learning models.
- **DevOps** : Create containers for deep learning model deployment using orchestrator such as K8s. Deploy Tensorflow model using **TF-Serving** and **MLFlow**.
- Used technologies : **Tensorflow, Pytorch, TFLite, Python, Kotlin, Android, Docker, nvidia-docker and Kubernetes.**

Groupe TBM Inc.

ARCHITECT DEVOPS

Montréal, Canada

January 2018 - September 2019

- Develop internal tools.
- Create backend architecture for internal tools. Used technologies : **Spring, Kotlin, Typescript et Angular.**
- Implement API based on GraphQL.
- **DevOps** : Install and configure servers for application deployment using containers. Used technologies : **AWS, GCP, Openshift/OKD, Kubernetes and Docker.**
- **IA** : Implement classification models for images.

Université de Sherbrooke

LECTURER

Sherbrooke, Canada

August 2017 - December 2017

- Course : **Distributed and multiagents systems.**

Laboratoire DOMUS, Université de Sherbrooke

PH.D. STUDENT

Sherbrooke, Canada

January 2015 - August 2018

- Create the architecture of the intelligent calendar.
- Manage developers working on the intelligent calendar.
- Create user interfaces for elderlies, that integrates **emotion communication** via **emotional virtual agents**.
- Develop an intelligent calendar adapted for elderlies.
Demo video : https://youtu.be/7Ln_upyQJWA.
- Run experiments at elderlies' homes of the intelligent calendar.
- Organize seminars of Intelligent Environments Research Center (**CREI**).

Laboratoire DOMUS, Université de Sherbrooke

INTERN

Sherbrooke, Canada

February 2014 - August 2014

- Develop an emotion analyzer from facial expression using AI.
- Develop advanced user interfaces to help elderlies to prepare meal.

Gedeom Communication / Group-Labs

SOFTWARE ENGINEER

Toulouse, France

September 2010 - February 2014

- Develop an e-commerce solution for car parts.
- Install, configure and administrate GNU/Linux Servers.
- Construct a multitouch interactive table and develop a Desktop Environment Like.

Education

Université de Sherbrooke

PH.D. IN COMPUTER SCIENCE

Sherbrooke, Canada

2015 - 2018

- **Thesis Subject** : Facilitate the use of computer interfaces to elderly by implementing emotional user interfaces capable to convey emotional information.

École Nationale d'Ingénieurs de Carthage

ENGINEER'S DEGREE IN COMPUTER SCIENCE

Tunis, Tunisia

2011 - 2014

- **Project Subject** : Implement an emotion analyzer based on facial expressions.

Personal Projects

Mask-RCNN in TFLite : A guide explaining how to convert Mask-RCNN to TFLite to use with mobile devices.

WBT : Implementation of Behavior Tree in Node.js.

CabMed : Doctor's office management software implemented in C++ and Qt.

Hémodialyse : A Desktop application to manage hemodialysis centers.

qTuio : Implementation of TUIO protocol for Qt to use with multitouch interfaces.

Areas of interest

READING AIKIDO MECHANICS MUSIC ELECTRONIC ROBOTIC