



## Experience

### 9DWLAB

#### Co-founder & Chief Operating Officer

- Architect of IYO, A Smart Peer-to-Peer Distributed Intelligence
- Design and implement business strategies, plans and procedures.
- Establish policies that promote company vision and mission.
- Product design and negotiation with the clients.

Tokyo, Japan

Dec. 2018 - Present

### 9DW

#### Chief Artificial Intelligence Officer

- Apply machine learning and AI methods into client work spanning a range of use cases including exploratory insights, predictive modeling reporting, and optimization.
- Develop innovative solutions for client work built into standardized methods.
- Supervision of 15 engineers (project management, axis of research, code review...).

Tokyo, Japan

April. 2017 - Present

### 9DW

#### Principal AI engineer

- Speech recognition, system developer, data analyst and model architect.
- 3D Mesh generation by DNN, system developer, data analyst and model architect.
- Earthquake prediction based on EMD/IMF and LSTM neural network.
- Development of patented solution for the generation of dental mesh.
- Brain anomaly detection based on KL divergence using VAE.
- Building reconstruction based on genetic algorithms.
- Setup of server Linux and services AWS/GCP/AZURE.

Tokyo, Japan

Feb. 2016 - Present

### WASEDA UNIVERSITY

#### Research Assistant / Data Analyst

- Matlab developer using NARX (nonlinear autoregressive with exogenous input) for causality detection.
- Signal processing and causality quantification from CMS using Matlab Neural Nets toolbox.
- Improvement of pre-processing methods for causality detection using KNN/FKNN.

Tokyo, Japan

Oct. 2015 - Mar. 2017

### TOKYO UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

#### Research Assistant / AI Architect

- Software architect of a new hybrid architecture HREP-3 for multi-modal analysis of interaction in HRI.
- Software development in C# for head tracking with KinectV2 from Microsoft.
- Android developer for an application of data visualization under Unity3D in C#.
- Unity3D interactive game «Magic Trick» using Pepper from Aldebaran Robotics.
- Modules developed: NLP (ALICE - Java), Vision (Anaconda -Python), Multi-threading for Client/Server (Python).

Tokyo, Japan

Oct. 2015 - Feb. 2016

### ISIR/CNRS

#### Research Intern / Data Analyst

- Developer C++ of OpenSmile for large-scale feature extractor from multimedia files.
- SVM technique used for detection of social commitment with voice signal in the first universe age with 75 % accuracy.
- Cluster of computers for data analysis.

Paris, France

Jun. 2014 - Nov. 2014

### LIP6/CNRS

#### Research Intern / Software Developer

- Developer of WEKA OpenSource library for Data Mining in JAVA.
- Development and integration of semi-supervised module.
- Proposal and optimization for cluster detection.
- Contribution for cluster detection with linear complexity  $O(n)$  in time and memory.

Paris, France

Jan. 2014 - May. 2014

## Education

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### PhD. candidate in Artificial Intelligence and Robotics

Tokyo University of Agriculture and Technology

Tokyo, Japan

Sept. 2015 - Sept. 2016

### M.Sc. in Artificial Intelligence

Sorbonne University / Telecom ParisTech

Paris, France

Sept. 2013 - Sept. 2015

### B.S. in Mathematics

UM2, (University Montpellier 2)

Montpellier, France

Sept. 2010 - Sept. 2013

### B.A. in Anthropology and Sociology

UM3, (University Montpellier 3)

Montpellier, France

Sept. 2010 - Sept. 2013

## Grants

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Scholarship French Ministry of Higher Education and Research for mobility to Japan.

Feb. - Aug. 2015

## Publications

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White Paper	<b>IYO: A Smart Peer-to-Peer Distributed Intelligence</b> J-M. Cadic	Dec. 2019
Journ.	<b>The emotional component of Infant Directed-Speech: a cross-cultural study using machine learning, Neuropsychiatrie de l'enfance et de l'adolescence, Elsevier</b> J-M. Cadic	Oct. 2019
Rev.	<b>Imaginary and Artificial Intelligence through a transversal approach</b> J-M. Cadic, Societes N 131	Jan. 2016
Journ.	<b>Towards an affordable mobile analysis platform for pathological walking assessment.</b> V.Bonnet, C. Azevedo Coste, L. Lapierre, J-M. Cadic, P. Fraisse, R. Zapata and C.Geny, Robotics and Autonomous Systems, Volume 66, Pages 116-128	Apr. 2015
Conf.	<b>The universality of motherese prosodic characteristics.</b> Erika Parlato, Catherine Saint-Georges, M. Chetouani, J-M. Cadic, Conference, 3 IPC in RIO, Domain Specificity in Language Acquisition & Processing	Apr. 2015

## Patents

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JP	<b>A RECOMMENDATION SYSTEM FOR COMPOSITE ASSEMBLING PROBLEMS</b> J-M. Cadic	Ongoing
JP	<b>8048. (WO2018230303) THREE-DIMENSIONAL PROSTHESIS MODEL GENERATING DEVICE, PROSTHESIS FABRICATION SYSTEM, THREE-DIMENSIONAL PROSTHESIS MODEL GENERATING METHOD, AND THREE-DIMENSIONAL PROSTHESIS MODEL GENERATING PROGRAM</b> J-M. Cadic	Dec. 2018

## Skills

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ML/DL	CNN/RNN/GCN, GAN, NLP, HMM, GMM, Clustering, Neuro-evolution, Evolutionary algorithms,
Data	Data pipeline (gather, process, train ...)
OS	Linux (Debian, Ubuntu), MacOS, Android, Windows
DevOps	Design solution, PoC, Test, Release
Coding	Python, Java, Go, C#, LaTeX
DB	MongoDB, Redis, SQL, SQLite3
System	VPN (setup/admin), Git (setup/admin), Compilation(ARM/AMD64/ARMHF/POWER9)
Writing	Publications, White Paper, presentations, reports
Language	EN: Professional proficiency, JA: Basic, FR: Native Speaker, ES: Conversant