Loïc Bachelot | Data Scientist

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Work Experience

Data Scientist, *IFREMER - France,*   01/2021
- Machine learning applied to ocean data in a cloud environment for European project **Blue-Cloud**:
  in the group of Kevin Balem, Guillaume Maze, Andrea Garcia Juan (Ifremer LOPS) and Massimiliano Drudi (CMCC)
- Temperature and salinity profiles prediction using deep learning on Argo data
  in the group of Etienne Pauthenet, Anne-Marie Treguier and Kevin Balem (Ifremer LOPS)
  Pauthenet, E. et al.: Four-dimensional temperature, salinity and mixed-layer depth in the Gulf Stream, reconstructed from remote-sensing and in situ observations with neural networks, Ocean Sci., 18, 1221–1244, https://doi.org/10.5194/os-18-1221-2022, 2022.
- Bioacoustics: automatic detection and extraction of biomass in acoustic data
  Work with Muriel Dunn (Memorial University of Newfoundland)
  Following OceanHackweek work supervised by Nick Mortimer (CSIRO), Wu-Jung Lee, and Emilio Mayorga (UW)

Data Scientist, Revenue management, *Air-France KLM***,** *Paris - France*   02/2020-07/2020
- Building tools to support the pricing and the booking of commercial flights used at Air-France KLM and many other airlines (Delta, Alitalia, China Airline: more than 8000 users), decision support.
- Co-product owner of the project on private fares, working with Infare.

Deep learning Research Intern   05/2019-10/2019
Laboratoire des Signaux Systèmes Intégrés, the University Of Quebec In Trois-Rivières - Canada,
- Research and implementation on CNN in the frequency domain
- Parallel programming using a polyhedral tool
- Parallelization on GPU and CPU of genes detection in DNA using signal processing: 600x faster: openMP, profiling
  Massicotte, et al. "Low Complexity Frequency Monitoring Filter for Fast Exon Prediction Sequence Analysis", IEEE Global Conf. on Signal and Information Processing (GlobalSIP), Ottawa, Nov. 2019.
- Collaborated on other research projects involving artificial intelligence (EEG/EMG movement recognition, speaker distortion)

Academic Work

Adversarial MCTS at *Etis lab - CNRS UMR8051 - France,*   10/2018-03/2019
- Combined an adversarial learning model with a Monte Carlo Tree Search algorithm: deep learning, computer vision
- Demonstrated it can be as performant as using the ground truth for Puzzle solving
- Communicated my work to MM. Paumard for her PhD

Emotional rating of events based on tweets at *University of Cergy-Pontoise - France,*   01/2018-06/2018
- Event detection (concerts, football...) using Twitter live stream: data integration, cleaning, clustering
- Emotional rating of the tweets to rate the events: Natural language processing, emotional rating

Education

Master of Science: Artificial Intelligence and Big Data - *University Of Cergy-Pontoise - France*	09/2017-09/2019
Exchange Semester: Artificial Intelligence and Big Data - *University Of Jyväskylä - Finland*	01/2018-06/2018
Bachelor of Science: Computer science *(equivalent)* - *University Of Cergy-Pontoise - France*	09/2014-09/2017

Leadership

Entrepreneur - Customer fidelity mobile app with two partners: Business plan, market study, pitch	08/2017-06/2018
General secretary Junior enterprise - Customer relationship, project management	09/2016-12/2017

Skills

General	**Programming**	**Tools**
Machine learning/Deep learning	Python	Linux/Windows
Parallel computing/cloud	SQL	Apache Spark
Data Mining	C/C++, Java	Keras/Tensorflow
Project management	JS/HTML/PHP/CSS	Tableau
English: Fluent	Git	MPI/OpenMP
French: Fluent		HPC/Cloud