Valentin Charvet

First year PhD Student

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Education

2019-Current

University of Glasgow - School of Computing Science

I started a PhD within the *Inference, Dynamics and Interaction* section, under supervision of Roderick Murray-Smith and Bjørn Sand Jensen. Current projects:

- Optimization of Traffic Light control using Single and Multi-Agent Reinforcement Learning
- Variational Inference methods for scaling Deep Gaussian Processes to large datasets
- Study of Closed-Loop control systems

2015-2019

Télécom Paris - Université Paris-Saclay

One of the top French Engineering school, specialized in applied mathematics and computer science

MSc

DataScience and Machine Learning

2013-2015

Lycée aux Lazaristes

Two-year intensive foundation course for competitive entrance in French engineering schools, specialization in Math and Physics

Experience

Spring 2018

Intitut Gustave Roussy

Machine Learning Research, 6 months internship

Institut Gustave Roussy is one of the world leading cancer research institutes of patient care, research and teaching

Initiated a research project in the Therapeutic Innovation and Early Drug Development Department (DITEP) to design a decision support tool for doctors in the context of oncology phase I clinical trials

Consisted in clinical database processing (tabular, categorical and free text data) and prediction model training for accurate patient selection (5 to 10% improvement)

Fall 2017

Claravista

Machine Learning Engineer, 6 months internship

Claravista is a Paris-based high performance marketing firm

Implemented a LifeTime Value algorithm based on Random Forests and Markov Chains and integrated of the API to Claravista back-end data analytics platform

Summer 2016

OLPC (NGO), volunteership

Teaching basic computer science in a remote village in Madagascar, technical maintenance of educational laptops and Installation of a local intranet for the villagers

2016 - 2017

Student Cafeteria, Manager

Responsible of a team of 15 people and 100k€ annual budget as well community management

Achievements

Distributed Density-Based Clustering
Implementation of a density-based clustering algorithm with Apache Spark, as part of a long term Masters project. The method I implemented is very similar to the OPTICS algorithm, with modifications to make it consistent with the distributed nature of the Spark engine.

Scientific Paper Implementation
Implementation of the paper *Deep Reinforcement Learning from Human Preferences* (Christiano et al, 2017)

Machine Learning Challenges
Took part in three internal challenges: Acoustic Scene Classification, face recognition and Object Geolocalization (code and report available at https://github.com/vcharvet/geoloc-challenge) using machine learning and numerical optimization.

Collaborative Apprenticeship project
Coding an Android app to creating music sheets using the voice. Role in the project: signal processing

Languages

French (native) English (professional) Spanish (basic)

Hobbies

- Former members of several student clubs: cafeteria, video, student union
- Music (listening and playing)
- Collective sports, high-level alpine skiing