Antoine **Marot**

LEAD AI SCIENTIST · MACHINE LEARNING

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"Artificial intelligence for building human-centered assistants"

Experience

RTE (French Power Grid Operator)   *Paris, France*

LEAD AI SCIENTIST   *2019 - Currently*
- **Expert**: In charge of Artificial Intelligence topics with a team of experts. Topics cover deep learning for learning physical simulators, reinforcement learning for power grid operations, interactive machine learning with experts, weakly supervised historical data labeling, contextual power grid segmentation with information theory.
- **Open-Science Project Manager**: Managing our leading L2RPN open-science flagship initiative and community.
- **Speaker**: Representing RTE at several conference and webinars on AI such as IJCNN 2019 Keynote.
- **AI advocate at RTE**: Organized an AI Conference for executives and set up an introductory AI training program for employees.

R&D TEAM LEADER, APOGEE PROJECT: BUILDING A PERSONAL ASSISTANT FOR COMPLEX SYSTEM OPERATORS   *May 2014 - 2019*
- **Scientist**: In charge of Artificial Intelligence research topics to build recommender systems with several PHDs and interns.
- **Coordinator**: Collaborate with grid operators to formalize their expertize into numerical objects to build new databases for smart operations.

Fludia (Smart Metering)   *Remotely & Paris*

RESEARCH ENGINEER   *Mar. 2013 - May 2014*
- **Developer**: Developed an advanced OCR reader on top of old power meters to make them smart.
- **Algorithm**: Energy disaggregation algorithms with signal processing and Markov Chains to recover usages from meter data.

TESLA Motors Inc (Connected Electric Vehicle)   *Palo Alto, USA*

TEST & VALIDATION INTERN ON MODEL S   *May 2013 - Oct. 2013*
- **Engineer**: set up a new data-driven methodology to define car tests to be run on new software releases, for ModelS connected vehicles, by discovering customer preferred interactions. Further developed a GUI for visualization and analysis.
- **Data Scientist**: Identify supercharger usage and crowded stations, to make recommendations on network development.

Research Contribution

RTE Research   *Paris, France*

PHD THESIS CO-ADVISOR WITH ISABELLE GUYON   *Dec 2015 - current*
- Launched 3 PHDs for RTE, in collaboration with INRIA and LORIA, to develop new ML methods for power systems that make recommendations to operators to best operate a complex system in real-time. A current source of inspiration is the AlphaGo framework (imitation learning, game-like environment generation and reinforcement learning by simulation).
- 10 scientific publications and presentations at international conferences. More ongoing. See **scholar**.

Data Challenges   *WorldWide*

SEE4C EUROPEAN DATA CHALLENGE   *2017*
- Involved in setting up the See4c European data Challenge on behalf of RTE, as partners. Speaker at the ML spatiotemporal forecatsing **NIPS see4c workshop**.

LEARNING TO RUN A POWER NETWORK CHALLENGE   *2019 - Currently*
- Designing series of challenge for the research community to help us tackle a vital industrial problem, robustly running a power grid, with reinforcement learning methods. Featured at IJCNN, WCCI, NeurIPs and ICAPS. See our **Github platform repository**.

Education

Stanford University   *Stanford, USA*

MASTER IN SCIENCE AND ENGINEERING, GPA : 3.85   *Sept. 2011 - April 2013*

Centrale Paris   *Paris, France*

MASTER IN ENGINEERING, GPA : 4.0+   *Sept. 2009 - June 2011*

Extra Information

Programming : R, Python, C++, Matlab, Jupyter, Git, Docker
Hobbies : Sports (handball, kitesurf, running), Drone footage, History of international relations, Travelling