IEEE BDA Tutorial Series: Big Data & Analytics for Power Systems

Learning to run a power network in a sustainable world
Part I: The RTE competition and problem definition

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RTE

9:00 am-10:00 am, Thursday, Jul. 23, 2020, Pacific Time
(6:00 pm - 7:00 pm, Thursday, Jul. 23, 2020, Central European Summer Time)
(12:00 am – 1:00 am, Friday, Jul. 24, 2020, China Standard Time)

Abstract: On the way towards a sustainable future, this competition aims at unleashing the power of reinforcement learning for a real-world industrial application: controlling electricity power transmission and moving closer to truly "smart" grids using underutilized flexibilities. In track 1, develop your agent to be robust to unexpected events and keep delivering reliable electricity everywhere even in difficult circumstances. In track 2, develop your agent to adapt to new energy productions in the grid with an increasing share of less controllable renewable energies over years.
Keywords: Reinforcement Learning, Control problems, Safe Machine Learning, Representation and Transfer learning, Sample Efficient Learning.

Bio: Antoine Marot is the lead AI scientist at RTE. He owns a double master degree in Engineering from Ecole Centrale Paris and Stanford University. After interning at Tesla Motors, he joined RTE R&D on the Apogee project 6 years ago with the long term goal to develop a personal assistant for control room operators with AI. Through collaboration with INRIA (the french AI research lab), he supervised several PHD students on augmented power system simulators with AI and on Human-Intelligent Machine interactions with a strong focus on interpretability. He recently co-authored several papers using AI for power systems and gave different talks on the topic such as IJCNN AI conference keynote. He advocates for a new "AI for power system community" bringing together researchers from both fields to accelerate the application of AI. The « Learning to Run a Power Network « challenge which will run along NeurIPS 2020, the largest AI conference, is a strong step forward towards it.

Link: https://asu.zoom.us/j/5513218843