MICHELANGELO CONSERVA

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EDUCATION

PhD in Artificial Intelligence

Queen Mary University of London

Sept 2020 - Ongoing — London, UK

Supervisors

- Funded by the Intelligent Games and Game Intelligence (IGGI) CDT.
- Large pool of supervisors from two leading UK university, QMUL and York, through the IGGI programme.
- Strong focus on model based Reinforcement Learning algorithms.

MSc in Computational Statistics and Machine Learning

University College London

Sept 2019 - Sept 2020 — London, UK

- Graduate with Distinction.
- *"Submodular Kernels for Efficient Rankings"*, MSc Dissertation under the supervision of Prof. Marc Deisenroth and Dr. Sesh Kumar.
  (Conference paper submission)
- Advanced analytical and computational skills.
- Designed to be both mathematically rigorous and hands-on, the programme covers fundamental aspects of Machine Learning and Statistics.
- Chosen modules: Probabilistic and (Un)Supervised Learning, Approximate Bayesian Inference, Numerical Optimization, Kernel Methods, Natural Language Processing, Statistical Models and Reinforcement Learning.
- Teamwork skills development through intense group courseworks.

BSc in Statistics, Economics, Finance and Insurances

La Sapienza University of Rome

Sept 2016 - Sept 2019 — Rome, Italy

- Graduate with 110 with honours/110.
- Dissertation on Enforcing cooperation through Reinforcement Learning under the supervision of Prof. Werner Güth and Prof. AnnaConte.
- Strong mathematical skills with focus on Statistics and Probability.
- Application of Statistical methodologies to Economics and Finance (including timeseries analysis and econometric analysis)
- Exposure to the financial market through practical trading strategies exercises using Quantopian).
- Statistical analysis using Python, R and Matlab.

PROJECTS

Team fight prediction

Queen Mary University of London

Jan 2021 — London, UK

As part of my CDT training, I developed a Machine Learning pipeline (data processing, feature engineering, model training and model testing) to process more than four millions data points taken from professional Dota 2 matches to predict the team fight event in less than two weeks. The training procedure includes multithreading code to dynamically load the massive dataset and a Pytorch neural architecture.

SOFTSKILLS

Team Work | Responsibility | Work Under Pressure | Agile | Kanban

STRENGTHS

Strong motivation | Fast Learner | Mental Flexibility | Time management

PROFESSIONAL SKILLS

- Deep Learning (Pytorch, Tensorflow, Jax).
- Statistical analysis (Pandas, Sklearn, Scipy).
- Machine Learning Pipeline building.
- LaTeX scientific writing.
- Expert user of Linux and Windows OS
- OOP (C++,C#,Java,Python), Advanced.
- Data-Driven Programming, Novice.

ACHIEVEMENTS

- Secured four years PhD funding from the IGGI CDT.
- Giochi di Anacleto (Physics Olympics): first place in the school (2015), third place in the school (2014).
- Maths Olympics: first place in the school (2015).

EXTRA CURRICULAR

- Nuffield Research Placement. Mentoring a high school student coming from a disadvantaged background to help diversify people in STEM.
- Volunteering at local youth association "Giovani Tiburtini" to provide human-to-human support to homeless people.

LANGUAGES

Italian: Mother tongue
English: Advanced

Natural Language Informed Reinforcement Learning agents

University College London

Jan 2019 - March 2020 London, UK

In this coursework project, I have worked on improving data efficiency and generalization capabilities of Reinforcement Learning agent through the use of Natural Language.
Github source code.

DeepBriscola

La Sapienza

Nov 2018 - Feb 2019 Rome, Italy

I started a remote collaboration to develop a reinforcement learning-based agent to play the Italian card game of Briscola.
Github source code.

FinancePy

La Sapienza

May 2018 - Nov 2018 Rome, Italy

I developed an open-source scraping tool using Beautiful Soup and Pandas for financial data including support for Morning Star and Yahoo Finance. It also includes basic financial time series (non)parametric analysis.
Github source code.

Game development projects

Sep 2017 - Ongoing

Starting from my BSc, I have started developing games using Unity and Unreal game engines.
My open source projects are:

- Total War: AI. This project is part of my PhD project and its objective is to develop a lightweight clone of Total War battles to enable the use of modern Artificial Intelligence algorithms in real games.
  Github source code.
- DinosHur. A chart race game inspired by Mario Kart and Beh Hur. This has been developed as part of my CDT training.
  Github source code.
- DinosHur. A simple City builder simulator with moving cars and grid placement of buildings.
  Github source code.