António Capela

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Links

GitHub **antcap96**
Linkedin **appcapela**

Coursework

GRADUATE

Advanced Algorithms
Computability and Complexity
Artificial Intelligence
Machine Learning
Reinforcement Learning
Time Series Analysis
Probability Theory
Statistical Learning
Dissertation: An Adaptive and Transferable Dialog Management System for Social Aware Task Execution [1]

Skills

PROGRAMMING

Python • Julia • C • C++ • SQL • Scala

MISCELLANEOUS

Shell • LaTeX • Git • Microsoft Office • Confluence

Languages

ENGLISH

C1
Certificate obtained by achieving grade A on the FCE exam in 2013.

PORTUGUESE

Mother Tongue

Certificates

MICROSOFT – AZURE

Azure Data Scientist Associate
Azure AI Engineer Associate

Education

INSTITUTO SUPERIOR TÉCNICO

Bachelor's degree in Engineering Physics
Sep 2017 — Lisbon

INSTITUTO SUPERIOR TÉCNICO

Master's degree in Mathematics and Applications
Sep 2020 — Lisbon

Experience

MACHINE LEARNING INTERN

LIP Summer Internship
July 2017 – August 2017 — Lisbon, Portugal

- Data analysis on simulated data of di-Higgs production from CERN's ATLAS experiment.
- Development of a Machine Learning model with Neural Networks and Boosted Decision Trees to identify collisions that generate di-Higgs particles.

DATA SCIENTIST

Data Scientist Consultant at Xpand-IT
Oct 2020 – current — remote work, Portugal

- Worked with the Data Science team at major portuguese bank for over 1 year. Some of the things I worked on there were: creating ETL pipelines using pyspark that were orchestrated with Kedro and Apache Airflow; Development of Machine Learning models to be used by other teams at the bank.
- Developed a classification model in Azure Databricks for a major european agency. The model created was a gradient boosting tree (LightGBM) and was implemented as a real time inference model in a Kafka stream.
- Worked for an Irish Startup, were we developed an image classification model. The model consisted of a Convolutional Neural Network, implemented with Keras making use of transfer learning from the VGG16 model.
- Performed sentiment analysis using Azure Cognitive Services and keyword extraction with YAKE to identify causes of complaint in messages.

Personal Projects

SQLINPYTHON

SQL library in python
Inspired by python code containing strings with SQL queries and with the goal of improving my knowledge in: creating a python library, static typing using mypy as well as SQL, I ended up developing a toy library to mimic SQL syntax but using python objects with static checks that ensure the SQL syntax is valid.

References

[1] Antonio Capela et al. "An Adaptive and Transferable Dialog Management System for Social Aware Task Execution". In: *EPIA Conference on Artificial Intelligence*. Springer. 2019, pp. 232–243.