

Antonio Ercole De Luca

Machine Learning &
Software Engineer


SKILLS

- Python
- SQL
- Pandas
- Django
- Docker
- Selenium
- AWS
- Google Cloud
- postgres
- Airflow
- optuna
- prophet
- Bash
- Scrum
- TDD

LANGUAGES

- Italian
- English
- Spanish

CONTACTS:

 eracle@posteo.eu

<https://eracle.me>



PROFILE

I am a Senior Software Engineer, working as a consultant since 2016, having shifted over different roles such as Machine Learning Engineer, Data Architect, Data Scientist, DevOps, and Scrum Master. I have worked on all aspects of data management such as retrieval, storage, cloud infrastructure scaling, data analysis, and mining; encompassing web scraping, design of relational databases, cloud deployment, RESTful API, and Jupiter Notebook.

In 2019 I took a couple of sabbatical years to get into the world of Statistics & Finance.

During my career, I also contributed to two scientific papers in the field of Web Scraping and Data Visualization.

WORK EXPERIENCE

Molofinance

London, Remote
(2022)

World Food Program

United Nations, Remote
(2021)

Consultant

Remote
(2017 - 2019)

Legalkite Ltd

Zurich, Remote
(2016 - 2017)

SpazioDati

Pisa, Italy
(2015-2016)

Synthema

Pisa, Italy
(2014-2015)

Software Engineer

I joined a team of 8, responsible for a product providing Residential mortgages to UK customers. I helped adapt another product already launched on the UK market that provided Buy To Let mortgages.

Activities: Code refactoring; adding backwards-compatible changes to RESTful API; bug triaging and fixing.

Software Engineer

In a team of 10+ Software Developers, I worked on the Humanitarian Booking Hub: a platform used by UN agencies employees to book accommodations, car rides, flights and clinic visits;

- I used my Scrum experience to let the team achieve effective daily stand-ups;
- standardized and documented Test-Driven Development practices;
- arranged periodical meetings to spot technical debts in past designs;
- I laid the foundations for e2e testing by introducing Factory boy.

Data Architect

I worked with more than 10 international clients on Upwork.com receiving 5/5 stars as median feedback.

Some stories:

- Designed an image similarity search engine with near zero response time, indexing more than 40 000 imgs by using Approximate Nearest Neighbors data structure;
- Reduced client's cloud infrastructure costs by dockerizing a Django app and migrating from Digital Ocean to Google Cloud;
- Built a Django app with 83% testing coverage by using Test Driven Development.

Back-end Software Engineer

Design of several RESTful endpoints;

Improved 10x REST API response time by translating Django ORM queries into raw SQL queries;

Solved data inconsistency bugs by:

- Refactoring postgres schema;
- Making Elasticsearch a read-replica;

Scaled 100x scraping module by porting it to scrapy and scrapinghub.

Machine Learning Engineer

Design of a Human-in-the-loop Active Learning workflow using CrowdFlower API.

Increased 2x F1-score in Logistic Regression model used for Named Entity Linking by using Uncertainty Sampling.

Software Developer

Productionize Natural Language Processing steps:

Segmentation, Tokenization, POS, Stop Words, Dep.Parsing, NER;

(Romanian, Japanese, Chinese and German)

EU funded (5.6 Mln €) project: CAPER.

EDUCATION

Bachelors Degree

Statistics & Data Science

Università di Palermo, Italy

Financial Mathematics, Finance Theory, Multivariate Analysis, Inference, R Language, Probability.

(2019 - 2020)

Masters Degree

Data Science and Business Informatics

University of Pisa, Italy

Thesis on Natural Language Processing:
Applying Active Learning on Entity Linking.

(2011 - 2013)

Bachelors Degree

Computer Science

University of Pisa, Italy

Thesis on Natural Language Processing:
Document classification using lexical and semantic resources.

(2007 - 2010)