# Antonio Ercole De Luca

Senior Software Engineer Data Architect

#### **SKILLS**

- Python
- SQL
- Pandas
- Django
- Docker
- Kubernetes
- AWS
- Google Cloud
- Snowflake
- Airflow
- dbt
- Prefect
- Metaflow
- Scrum
- TDD

#### LANGUAGES

- Italian
- English
- Spanish

#### CONTACT



- E-mail: eracle@posteo.eu
- Personal web site: 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**

# World Food Program (2021)

#### Senior Software Engineer

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

- used my Scrum experience to let the team achieve effective daily stand-ups
- standardized and documented Test Driven Development with pytest config;
- periodical meetings to spot technical debts in past designs;
- laid the foundation of e2e testing covering Django models with Factory boy.

# Consultant, Remote (2017 - 2019)

#### Data Architect

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.

# Legalkite Ltd, Zurich (2016 - 2017)

#### 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.

SpazioDati, Pisa, Italy (2015-2016)

#### Machine Learning Engineer

Design of a Human-in-the-loop Active Learning workflow using CrowdFlower API (now Appen). Increased 2x F1-score in Logistic Regression model used for Named Entity Linking by using Uncertainty Sampling.

Synthema, Pisa, Italy (2014-2015)

#### 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.

## Masters Degree

Data Science and Business Informatics

University of Pisa, Italy

Thesis on Natural Language Processing:

Applying Active Learning on Entity Linking.

### Bachelors Degree

Computer Science

University of Pisa, Italy Thesis on Natural Language Processing:

Document classification using lexical and semantic resources.

(2019 - 2020)

(2011 - 2013)

( 2007 - 2010 )