# Antonio Ercole De Luca

Data Architect

Jr. Quantitative Developer

### **PROFILE**

I am a Data Architect, working as a consultant since 2016, having shifted over different roles such as Software Developer, Data Scientist, ML Engineer, DevOps and Scrum Master. I have worked on all aspects of data management such as Retrieval, Storage, Cloud Scaling, Analysis and Mining; encompassing Web Scraping, Design of Relational Databases, Deployment of Cloud Infrastructure, RESTful interfaces and Jupiter Notebooks.

In 2019 I left consultancy to become a quantitative developer.

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

## **SKILLS**

- + Python
- + SQL
- + Pandas
- + Django
- + Docker
- + Kubernetes
- Regression

# **LANGUAGES**

- + Italian
- + English
- + Spanish

# **WORK EXPERIENCE**

# 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 MIn €) project: CAPER.

#### **EDUCATION**

**Bachelors Degree** 

Statistics & Data Science

Università di Palermo, Italy

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

Masters Degree

(2011 - 2013)

(2007 - 2010)

(2019 - 2020)

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.

### REFERENCES

Massoud Zekeria Founder at LegalKite Ltd massoud.zekeria@gmail.com

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