

# 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     | <div><div></div></div> |
| + SQL        | <div><div></div></div> |
| + Pandas     | <div><div></div></div> |
| + Django     | <div><div></div></div> |
| + Docker     | <div><div></div></div> |
| + Kubernetes | <div><div></div></div> |

## LANGUAGES

|           |                        |
|-----------|------------------------|
| + Italian | <div><div></div></div> |
| + English | <div><div></div></div> |
| + Spanish | <div><div></div></div> |

## WORK EXPERIENCE

Consultant, Remote  
(2017 - 2019)

### Data Architect

Worked with more than 10 international clients on Upwork.com and 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 (2019 - 2020)

Statistics & Data Science

Università di Palermo, Italy

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

Masters Degree (2011 - 2013)

Data Science and Business Informatics

University of Pisa, Italy

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

Bachelors Degree (2007 - 2010)

Computer Science

University of Pisa, Italy

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

## REFERENCES

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Sasha Iatsena  
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