





# Caterina Bonan

PhD in Linguistics | Data and AI Trainee

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## SELECTED EXPERIENCE

### AICORE | DATA AND AI TRAINEE

May 2022 – Present | London, UK

Training in AI & Data Engineering using industry-standard tools. Working on multiple industry projects throughout.

- Skills: Software engineering (Git & GitHub, advanced Python, algorithms & data structures); Data engineering (SQL, data lakes, data warehousing, web scraping); Cloud Engineering (cloud computing, designing/building APIs, Docker, Apache Airflow, AWS Serverless Stack).

### UNIVERSITY OF CAMBRIDGE | POSTDOCTORAL RESEARCHER

September 2019 – Current | Cambridge, UK

Postdoctoral research on comparative Romance syntax. Worked on 30+ standard and non-standard varieties throughout. Published 8 peer-reviewed research articles, 2 edited volumes and 1 research monograph. Awarded a SNSF 'PostDoc.mobility' scholarship twice.

- Tools: Excel for data analysis and visualisation, Python, Matplotlib, HF Transformers, SQL, LaTeX, VS code, Microsoft Word and Power Point.
- Links to scientific writing samples: **Cadernos, IOS Press, Glossa, Isogloss.**

### UNIVERSITÉ DE GENÈVE | RESEARCH ASSISTANT

September 2015 – August 2019 | Geneva, CH

Fully-funded doctoral research as part of the SNSF-funded 'Wh-in situ in French interrogatives: Prosody and Syntax' research group. Worked on standard and non-standard French, and 50+ northern Italian varieties. Published 3 research articles, 1 co-edited volume, and a PhD dissertation.

- Tools: Excel for data analysis and visualisation, Python, Praat, LaTeX, Microsoft Word and Power Point.

### ELSE: CONSEIL, CRÉATION, ÉDITION | TRANSLATOR (IT>FR)

March 2014 – May 2014 | Paris, FR

Translation of book 'Grands écrivains: Les auteurs célèbres vus par de grands photographes' (Éditions du Chêne, 522 pp.; ISBN 978-2-8123-1085-0).

## EXPERIENCE THROUGH PROJECTS

### WEB SCRAPING PIPELINE | PYTHON, BEAUTIFULSOUP, SELENIUM, AWS, PROMETHEUS, GRAFANA.

Repo: [aicore-web-scraping-pipeline](#)

- Developed a module that scrapes data to upsert information to a database;
- Currently pushing an image of the containerised application in a CI/CD pipeline that performs unit testing and deploys the image to an EC2 instance.
- Will monitor the container using Prometheus and create dashboards to visualise metrics in Grafana.

### IMAGE CLASSIFIER FOR FLOWER RECOGNITION | PYTHON, TENSORFLOW.

Repo: [udacity-image-classifier](#)

- Python image classification application that runs from the command line.
- The application trains a deep learning model on the 102 Category Flower Dataset, and uses it to classify images of flowers.

### COMPUTER VISION APPLICATION | PYTHON, TEACHABLE MACHINE, OPENCV

Repo: [aicore-computer-vision](#)

- Trained a computer vision model and used Tensorflow to detect whether Rock, Paper or Scissors is shown to the camera in real-time and with a high accuracy
- Used the OpenCV library to access the webcam and play Rock Paper Scissors with the computer using the image from the camera

### PRE-TRAINED IMAGE CLASSIFIER FOR DOG BREEDS | PYTHON, PYTORCH

Repo: [udacity-ai-programming](#)

- Python programme that utilises an image classifier trained on ImageNet to identify dogs from non dogs, and dog breeds.
- Determines which Pytorch classification algorithm among AlexNet, VGG, and ResNet performs best at the task, and their runtime. Spoiler alert: it's ResNet!

## SKILLS

### PROGRAMMING

Intermediate:

Python (>2y) • LaTeX (>5y)

Familiar:

Java (>1y) • HTML (<1y)

### LIBRARIES/Frameworks

OpenCV • TensorFlow • Selenium  
PyTorch • pandas • Matplotlib

### TOOLS/PLATFORMS

Git • GitHub • Docker • SQL

### LINGUISTIC RESEARCH

Syntax, Documentation, Data modelling, IPA, Praat.

## EDUCATION

### MSC IN COMPUTER SCIENCE (WITH AI)

UNIVERSITY OF YORK

Nov 2021 - Present (on a leave of absence)

### PHD IN LINGUISTICS

UNIVERSITÉ DE GENÈVE

December 2015 - May 2019

### MA IN SCIENCE OF LANGUAGE

UNIVERSITÀ Ca' FOSCARI VENEZIA

October 2011 - June 2013

### BA IN SCIENCE OF LANGUAGE

UNIVERSITÀ Ca' FOSCARI

September 2008 - October 2011

## CERTIFICATES

Udacity

March 2022 - Present

Programming in Python for AI.

DEEPLARNING.AI

September 2022 - Present

NLP Specialization.

AICORE

May 2022 - September 2022

Python Programmer Certificate.

UNIVERSITÉ DE GENÈVE

December 2015 - December 2017

Specialisation in Linguistics.

## CURIOSITIES

I'm a retired pro volleyball player, and since 2015 I have attracted research funds for more than 400.000CHF (about £375.000).