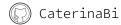
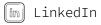
# Caterina Bonan

## 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 Al & 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)

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 Al.

DEEPLEARNING.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).