

Enrico Benedetti

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EDUCATION

2021 - present M.Sc. in Artificial Intelligence at **University of Bologna** (CGPA: 3.9/4.0)
Relevant courses: Natural Language Processing, Computer Vision, Machine Learning, Deep Learning
2018 - 2021 B. Sc. in Computer Engineering at **University of Bologna** (Final Mark: 107/110)
Thesis title: ‘Cryptographic CTF challenges: theory and techniques’

PROJECTS

Hierarchical deep learning approach for Human Value Detection

 [Link](#)

- Course project in NLP based on [SemEval 2023 Task 4. ValueEval](#): Identification of Human Values behind Arguments.
- It is a research work in which we propose and implement a new hierarchical approach for the task of extracting human values from textual arguments.
- We try 5 variations of the proposed architecture for multi-label text classification.

GarfieldRetrieve: a Deep Metric Learning comic strip Retrieval System

 [Link](#)

- I curated a dataset of Garfield transcribed comic strips, to perform document retrieval with natural language queries on it.
- I built a retrieval system based on Deep Metric Learning using Sentence Transformers and compared it to other techniques such as Latent Semantic Indexing.

Part-of-speech Tagging with Recurrent Neural Networks

 [Link](#)

- As a team, we implemented POS tagging using different architectures based on Recurrent Neural Networks.
- We wrote a paper-style report containing detailed analysis of results and performance.

1D Barcode Quality Verification

 [Link](#)

- My project for the Image Processing & Computer vision course. A jupyter notebook and python script for barcode localization and quality assessment.
- It can produce an analysis according to the IEEE guidelines for barcode quality, also for multiple images at once.

Capacitated Vehicle Routing Problem

 [Link](#)

- Our team project for the Combinatorial Optimization course.
- We implemented and documented our attempts at modelling the very famous CVRP using 4 frameworks (Constraint Programming, boolean SAT solving, SAT Modulo Theories, Mixed Integer Programming).

SKILLS

Language Skills	Italian (native); English (C1, IELTS Academic score: 8.0/9.0)
Programming skills	Python, Java, \LaTeX , JavaScript, C, C#, Bash, HTML+CSS, C++, SQL, Prolog, LISP, Scheme, MiniZinc, Matlab
Frameworks, Engines, Libraries	NumPy, Tensorflow, pytorch, pandas, huggingface, .NET, OpenCV, z3, darts
Development Tools & Environments	Git, UNIX/Linux, Visual Studio, GIMP, DaVinci Resolve, Unity

INTERESTS

I am very curious about technology/AI and its applications and implications on society. I am looking for internships and research opportunities in the AI field (in particular NLP and CV). Other than that, my biggest passion is computer gaming (RPGs, rythm games, a variety of eSports). I also enjoy visual arts (especially animation), music, literature, fitness, and internet humor.