Silvia Casola

Contact:
- scasola@fbk.eu
- +39 3277408493
- silvia.casola3 (Skype)

Personal details:
- Place of birth: Mazara del Vallo (TP), Italy
- Date of birth: 08 July 1993
- Citizenship: Italian
- Spoken Languages: Italian (Native), English (Proficient), Spanish (Conversant)

Updated: January 23, 2022

Research Interests

Natural Language Processing, Deep Learning, Machine Learning.

Research Profile

I am a Ph.D candidate in Natural Language Processing at University of Padua, owning a grant from Fondazione Bruno Kessler (Trento); my advisor is Alberto Lavelli (FBK). I am currently interning at Huawei Research (Dublin). I obtained a Laurea Magistrale (Master Degree) with honours in Computer Engineering (Data Science Curriculum) from Politecnico di Torino. During my Masters, I moved for ten months to Universitat Politècnica de Catalunya (Barcelona), where I completed my thesis. I was later awarded a ten-months research scholarship from Politecnico di Torino.
I currently work on Natural Language Processing, with a focus on summarization and simplification.

Education

- **University of Padua,** Italy *October 2019 – present*
  Ph.D. in Brain, Mind and Computer Science

- **Politecnico di Torino,** Italy *2016 – 2018*
  Laurea Magistrale (2 years M.S. equivalent) in Computer Engineering (Data Science curriculum).
  Thesis: *Reducing waiting times and crowding in hospital emergency departments using Machine Learning*.
  Supervisors: Prof. Ricard Gavaldà (UPC) and Prof. Silvia Chiusano (Politecnico di Torino)
  Grade: *110/110 cum laude*

- **Universitat Politècnica de Catalunya,** Spain *September 2010 - July 2010*
  Erasmus Program exchange - Artificial Intelligence and Innovation and Research in Informatics Masters

- **Politecnico di Torino,** Italy *2013 - 2016*
  Laurea (3 years B.S. equivalent) in Computer Engineering.
  Grade: *102/110*

Internships

- **Huawei Research,** Ireland *July 2021 – present*
  NLP Ph.D. Intern
  I developed a module to correct misspelt queries in the AppGallery, which is currently being deployed. Research wise, I am working on ensuring factuality and minimizing hallucination in a sequence to sequence system for text summarization.

Academic Appointments & Service

- **Programming Teaching Assistant (Python)** *October 2020 - February 2021*
  I gave classes, and assisted with exercises and homework grading (Programming course; first-year Math undergrads at University of Padua)

- **Research scholarship** *January 2019 - October 2019*
  I was part of a team in Politecnico di Torino designing a recommendation system for health structures (CANP project)

- **Computer Science Course Teaching Assistant (C)** *September 2017 - February 2018*
  I assisted with exercises and other lab work (Computer Science course; first-year Engineering undergrads at Politecnico di Torino)

- **Reviewer**
  - ESANN 2020
  - SMM4H 2020

Schools and courses

- **Technische Universität München (TUM),** Germany *August 2021*
  1st Munich Legal Tech Summer School

- **University of Grenoble and Naver Labs Europe,** Online *January 2021*
  Advanced Language Processing winter School (ALPS)

- **coursera.org,** deeplearning.ai
  Deep Learning Specialization; held by Prof. Andrew Ng (Stanford University) - Certificate
  Machine Learning Course; held by Prof. Andrew Ng (Stanford University)

Invited talks

- ***Natural Language Processing: an overview*** Machine Learning Course, University of Padua (invited by Prof. F. Aiolli)

Supervising activities

- ***Graduate Student (internal supervisor)***
  - Lucia Larocca, 2019 (Politecnico di Torino Master thesis)

Other

- ***Milan Critical Care Datathon 2020*** Organized by the European Society of Intensive Medicine
- ***CD: 50/50, co-founder*** No-profit association for promoting gender equality and diversity in STEM

Skills

Technical specialties: Software design and implementation, with(in) a team. Programming in Python, SQL, C. Basics in R, C++ and Java. Good knowledge of Machine Learning libraries (Numpy, Pandas, Scipy and Scikit-learn); Deep Learning frameworks (PyTorch) and NLP libraries (Hugging Face transformers, datasets).

Languages

Italian (native), English (full professional proficiency), Spanish (conversational proficiency)

List of Publications

- **Casola**, Lavelli (2021): WITS: Wikipedia for Italian Text Summarization. Eighth Italian Conference on Computational Linguistics. CLiC-IT 2021 (accepted)
- Louvan, **Casola**, Magnini (2021): Investigating Continued pretraining for Zero-Shot Cross-Lingual Spoken Language Understanding. Eighth Italian Conference on Computational Linguistics. CLiC-IT 2021 (accepted)
- **Casola**, Lavelli (2021): Summarization, Simplification, and Generation: The Case of Patents. Expert Systems with Applications (submitted)
- **Casola**, Lauriola, Lavelli (2021): Pre-Trained Transformers: An Empirical Comparison. Neurocomputing (submitted)
- **Casola**, Lavelli (2020): FBK@SMM4H2020: RoBERTa for detecting medications on Twitter. Proceedings of the Fifth Social Media Mining for Health Applications Workshop & Shared Task, co-hosted at COLING 2020

- Bassi, **Casola**, Mancinelli, Lai, Salcuni (2020): Internalizing-Externalizing Symptoms as Predictors of Problematic Smartphone Use among Adolescents: A Machine Learning approach. International Congress of Clinical and Health Psychology in Children and Adolescents. Poster Presentation - Competing as award for young researcher
- Bazzano, Montuschi, Lamberti, Paravati, **Casola**, Ceròn, Londoño, Tanese (2017): Mental Workload Assessment for UAV Traffic Control Using Consumer-Grade BCI Equipment. In: Intelligent Human Computer Interaction. IHCI 2017.