



# Andrés Cabero Busto

MACHINE LEARNING ENGINEER · SOFTWARE ENGINEER

Allmandring 18C-15, Stuttgart, Germany

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## Skills

<b>DevOps</b>	Docker
<b>Data Science</b>	Pandas, Plotly, Matplotlib, SQL
<b>AI &amp; ML</b>	Slurm, PyTorch, PyTorch Lightning, HuggingFace, Captum, SpaCy, NLTK
<b>Programming Languages</b>	Python, Rust, JavaScript, TypeScript, HTML, CSS, LaTeX
<b>Other</b>	Spanish, English, Italian, German Linux, NixOS, Nix, Bash, CLI, Git

## Experience

### Sony Research

Stuttgart, Germany

MASTER THESIS STUDENT

Apr. 2023 - Oct. 2023

- Performed domain-adaptation on an open-source, self-supervised (SSL) speech recognition model.
- Applied regularization-based and replay-based continual learning methods to avoid incurring into catastrophic forgetting on the old Librispeech ASR task.

### Sony Research

Stuttgart, Germany

WORKING STUDENT

Jul. 2022 - Mar. 2023

- Developed a natural language grammar based on weighted finite-state transducers (WFSTs) and the Thrax framework, similar to NVIDIA NeMo grammars, that enabled a 10% WER improvement for the pre-existing Italian ASR system.
- Time-aligned and transcribed speech utterances using Label Studio for use in text-to-speech (TTS) model training.

### University of Stuttgart

Stuttgart, Germany

PYTHON DEVELOPER

Jul. 2022 - Dec. 2022

- Developed the core of a toolkit for academic NLP research in lexical semantic change detection (LSCD), openly available at <https://github.com/ChangeIsKey/LSCDBenchmark>

### University of Stuttgart

Stuttgart, Germany

LINUX SYSTEM ADMINISTRATOR

Jul. 2022 - Mar. 2022

- Administration and maintenance of Linux servers and users.

### University of Stuttgart

Stuttgart, Germany

DATA ANNOTATOR

Nov. 2021 - Jan. 2022

- Data annotator for the first Shared Task of Lexical Semantic Change Discovery in Spanish (<https://fdzr.github.io/lscdiscovery/>). The process involved annotating the degree of difference between uses of the same word based on the surrounding context, using a Likert scale.
- Identified some problems in the annotation platform, and developed a small JavaScript solution to help my teammates and I work more efficiently.

## Education

### M.Sc. Computational Linguistics

Apr. 2021 - Oct. 2023

INSTITUT FÜR MASCHINELLE SPRACHVERARBEITUNG (UNIVERSITY OF STUTTGART)

Stuttgart, Germany

- Achieved an in-depth understanding of modern deep learning (DL) and natural language processing (NLP) techniques.

### B.A. Linguistics

Sept. 2016 - Dec. 2020

UNIVERSITY OF CÁDIZ

Cádiz, Spain

- Took several courses related to programming, natural language processing (NLP) and computer science (CS), achieving honors in several of them.