Andrés **Cabero Busto**

MACHINE LEARNING ENGINEER · SOFTWARE ENGINEER

Allmandring 18C-15, Stuttgart, Germany

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Skills

DevOps	Docker
Data Science	Pandas, Plotly, Matplotlib, SQL
AI & ML	Slurm, PyTorch, PyTorch Lightning, HuggingFace, Captum, SpaCy, NLTK
Programming	Python, Rust, Golang, JavaScript, TypeScript, HTML, CSS, LaTeX
Languages	Spanish, English, Italian, German
Other	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.