

# Stefano RIBES

## RESUME

### PERSONAL DATA

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PLACE AND DATE OF BIRTH: Correggio (RE), Italy | 29 Aug 1992  
CITIZENSHIP: Italian (EU)  
PHONE: +39 3517703650  
EMAIL: [ribes.stefano@gmail.com](mailto:ribes.stefano@gmail.com)  
LINKEDIN: <https://se.linkedin.com/in/stefano-ribes-1379b1107>  
GITHUB: <https://github.com/ribesstefano>

### EDUCATION

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2021 - June 2023 Master's Degree in **Data Science and AI**  
Avg. grade: 4.3/5 at CHALMERS UNIVERSITY OF TECHNOLOGY, Gothenburg, Sweden  
My studies mainly focused on deep learning and high performance computing.  
Thesis: "[Machine Learning for Predicting Targeted Protein Degradation](#)"

2016 - 2021 Swedish Licentiate of Technology Degree in  
**Multi-LSTM Acceleration and CNN Fault Tolerance**  
at CHALMERS UNIVERSITY OF TECHNOLOGY, Gothenburg, Sweden  
My research at Chalmers focused on two main topics:

- HLS design and implementation of machine learning accelerators on FPGAs
- Fault tolerance analysis of sparse and compressed CNNs

The thesis can be read on the [Chalmers.Research portal](#).

2015 - 2016 Erasmus Exchange in **Embedded Electronic System Design**  
Avg. grade: 4.25/5 at CHALMERS UNIVERSITY OF TECHNOLOGY, Gothenburg, Sweden  
I focused my studies at Chalmers on parallel computing and hardware design. I also touched upon topics related to the design of fault tolerant systems and software architectures for the automotive industry.  
Thesis: "*Design and Evaluation of Input-Aware Artificial Neural Networks*".

2014 - 2016 Master's Degree in **Computer Engineering, Embedded Systems**  
Final grade: 101/110 at POLYTECHNIC UNIVERSITY OF TURIN, Turin, Italy  
During my Master I studied all the required steps of the hardware design process, ranging from specification, RTL design and simulation, to synthesis and optimization. Within a course project, I've implemented, together with another student, a DLX-based microprocessor.

2011 - 2014 Bachelor's Degree in **Computer Engineering**  
Final grade: 96/110 at UNIVERSITY OF MODENA AND REGGIO EMILIA, Modena, Italy  
Thesis: "*Study and Research on Responsive Technologies for Web Applications*"

## WORK EXPERIENCE

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- June 2023 - Present **Research Student** at AI Laboratory for Biomolecular Engineering, CHALMERS UNIVERSITY OF TECHNOLOGY.  
At the AIBE laboratory, I'm continuing my master thesis work on predicting protein-ligand activity using deep learning models, mainly language models based on the Hugging Face Transformers library.
- Spring 2023 **Master Thesis Intern** at ASTRAZENECA, Gothenburg, Sweden.  
At AstraZeneca, I worked on my thesis titled "Machine Learning for Predicting Targeted Protein Degradation", focusing on designing diverse candidate deep learning models to predict PROTACs targeted protein degradation activity. The thesis can be read at this [link](#).
- 2020 - 2022 **Hardware Engineer** at COBHAM GAISLER, Gothenburg, Sweden.  
As a digital designer, I wrote and tested RTL modules and machine learning accelerators for integration in the RISC-V based NOEL-V processor.
- 2016 - 2020 **Teaching Assistant** at CHALMERS UNIVERSITY OF TECHNOLOGY, Gothenburg, Sweden.  
I taught VHDL and assisted students with projects related to signal processing and computer architecture, covering courses such as Digital Design, Introduction to Electronic System Design, and Computer System Technology.
- 2014 **Intern** at QUIX SOFTWARE SOLUTIONS & CONSULTING, Italy.  
My work focused on software development for public sector service management, utilizing Java, JavaScript, SQL, HTML, CSS, and Apache Maven.

## SELECTED PUBLICATIONS

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- [I] S. Ribes, P. Trancoso, I. Sourdis, C.-S. Bouganis, "Mapping Multiple LSTM models on FPGAs", *Int'l Conf. on Field-Programmable Technology (FPT)*, December, 2020.
- [II] N. Wessman, F. Malatesta, S. Ribes, J. Andersson, A. Garcia-Vilanova, M. Masmano, V. Nicolau, P. Gomez, J. Le Rhun, S. Alcaide, G. Cabo, F. Bas4, P. Benedicte, F. Mazzocchetti, J. Abella, "De-RISC: A Complete RISC-V Based Space-Grade Platform", *DATE*, 2022.

## PROGRAMMING SKILLS AND TOOLS

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Strong Experience in: PyTorch, PyTorch Lightning, Optuna, Pandas, Scikit-learn  
High Performance Computing: C, C++ , CUDA (CuPy and Numba), OpenCL  
Version Control: Proficient in Git for code versioning and collaboration in team projects  
Scripting: I'm confident scripting in both Linux and Windows environments

For more information, please visit my GitHub page: <https://github.com/ribesstefano>

## LANGUAGES

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ENGLISH: Fluent | IELTS 6.5 (2015)  
ITALIAN: Mothertongue

## INTERESTS AND ACTIVITIES

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Good sketching abilities and a fine eye for details,  
I love cooking, especially experimenting new cuisines,  
I play football as a goalkeeper and I particularly yearn for new challenges.