

Daniel Duclos-Cavalcanti

🌐 [duclos-cavalcanti](#) </> [duclos.dev](#) ✉ [me@duclos.dev](#) 📍 New York, NY 🇺🇸 U.S. Citizen 🗣️ Eng, German & Portuguese

SUMMARY

As a Computer Engineer from the Technical University of Munich, I have cultivated a global perspective, being born in the U.S., raised in Brazil and educated in Germany. My diverse background enriches my technical expertise with exceptional communication and interpersonal skills, enabling me to be an effective team player and collaborator. Currently based in New York, I am completing my master's program through a research collaboration with Dr. Sivaraman from NYU.

EDUCATION

New York University, Courant Institute of Mathematical Sciences

New York, USA

Visiting Non-Degree Seeking Student: Computer Science

Sept 2023 – May 2024

- Co-Author: Jasper: Fair Multicast for Financial Exchanges in the Cloud
- Ongoing Research: **"VM Selection Heuristic for Financial Exchanges in the Cloud"**
 - * Co-Advised by Dr.Sivaraman from Systems@NYU and Prof. Dr.-Ing. Kellerer from LKN@TUM
- CSCI-GA 2250 - Operating Systems - A

Technical University of Munich (Grad. Sept. 2024)

Munich, Germany

M.Sc. Electrical and Computer Engineering

Oct 2020 – Now

- M.Sc. Thesis (***Last Credit currently performed externally in NY***)
- EI70530: Embedded Systems and Security
- EI71104: Embedded System Design for Machine Learning
- EI78039: High Performance Computing for Machine Intelligence

Technical University of Munich

Munich, Germany

B.Sc. Electrical and Computer Engineering

Oct 2016 – Sept 2020

- **German GPA:** 2.2 (Top 37%) – [See Grade Distribution](#)

SKILLS

Languages: C, C++, Python, Golang, Rust, Lua, VHDL, Tcl, JavaScript, HTML/CSS

Tools: Terraform, Docker, Packer, AWS, GCP, Git, Unix Shell, Makefile, CMake, Linux, Jenkins

Technologies: Cloud Computing, Computer Networking, Embedded Systems, IoT, FPGAs, RTOS, TinyML, HPC

Frameworks/Libraries: ZeroMQ, DPDK, Tensorflow, TFLite, Pytest, GTest, OpenMPI, OpenMP, Xilinx Vivado

Hardware: Raspberry Pis, Embedded Linux, ARM Cortex MCUs, USB, TCP, UDP, IP, UART, GPIO

EXPERIENCE

EDA Department - TU Munich | Research Assistant

Jul 22–Oct 22, Oct 20–Mar 21

Two-Part internship, where I aided in developing a research Design-Space-Exploration framework that needed to:

- Run optimally the inference of Machine Learning Models across heterogeneous hardware (GPUs, CPUs, TPUs).
- Analyze traffic costs via processing USB traffic between the host and Google's Coral Edge TPU.

Molabo GmbH | Internship - Embedded Engineer

Aug 21 – Jan 22

Assisted the [motor-drive team](#) in developing:

- Streamlined workflows via Jenkinsfiles, CMake and GNU Make
- Features and Unit-Tests for their Embedded and FPGA Devices
- Internal Tooling such as a Linux virtual CAN interface to simulate communication within their systems

RCS Department - TU Munich | Tutor - Embedded Systems Lab

Apr 21 – Aug 21

- Tutor for the Embedded Systems Programming Lab at TU Munich.
- Aided students in their embedded/multi-threaded FreeRTOS projects in C.

PROJECTS

(16,11) Hamming-Code Err. Detection

C, FPGA, UART, VHDL, SoC, Microsemi

FreeRTOS-SpaceInvaders

C, FreeRTOS, RTOS, Multi-Threaded, Git, Unix Shell

Open-MPI-ValueIteration

C++, HPC, OpenMPI, Multi-Threaded, Distributed Workload

Serve CLI

Golang, CLI, Tooling, UNIX

CERTIFICATES

UCSD: Data Structures Fundamentals

UT Austin: Embedded Systems - uC I/O