

Prof. R. Wattenhofer

## Extending CUSF

Special functions refer to a loosely defined group of functions which are of particular importance in mathematical analysis, functional analysis, geometry and physics. Common examples are the exponential and logarithmic functions.

Libraries such as SciPy, PyTorch and CuPy implement some of these special functions on the CPU and GPU. However, GPU implementations are limited and neither CPU nor GPU scales well for large inputs, nor are they consistently accurate.

This project will focus on improving or extending the already existing library *CUSF* with GPU implementations of special functions (https://docs.scipy.org/doc/scipy/reference/special.html).

This can both entail writing code for functions not yet implemented or improveing the performance of already implemented functions.

## Requirements:

Prior experience and a strong interest in CUDA is recommended. Programming skills in C/C++ are necessary.

## Interested? Please contact us for more details!

## Contact

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