Miro Palmu - CV

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Personal Profile

I'm a motivated physics student with a focus in programming, simulations and high performance computing. Other intrests are GPU computing and technical details of C++.

Education

2020– Bachelor of Science: physics, University of Helsinki

Average grade of 4.97 out of 5 (195 ECTS)

Theoretical physics as major and computer science as minor.

2023 The CSC Summer School in High Performance Computing

Employment History

Summer CSC – IT CENTER FOR SCIENCE LTD.

2023 *Trainee*

Prepearing work for team Norppa in IndySCC HPC student competition and writing internal

documentation for SYCL and oneAPI SYCLomatic.

2022 – University of Helsinki2023 Part-time research assistant

Optimizing ionosphere potential solver of Vlasiator in space physics research group by porting

it to CUDA.

Summer University of Helsinki **2022** Research assistant

Data analysis of data from Vlasiator simulation in space physics research group.

2022 Aalto University and University of Helsinki

Teaching assistant

Two physics courses in Aalto and one in University of Helsinki.

Competitions

2nd place Indy Student Cluster Competition 2023

Member of team Kuutti (CSC).

I was sysadmin in the team and responsible for writing Ansible script to automate our cluster

setup (github.com/MiroPalmu/kuutti).

Positios of Trust

2022 Resonanssi Ry

Secretary

Secretary and member of the board at Resonanssi ry, which is a organization for students of the

physical sciences at the University of Helsinki.

Technical skills overview

Strong knowledge of C++ development, technical concepts and tooling around it (compilers, build scripting, automated testing, debugging, package managers, etc.). Deep knowledge of local and HPC Linux environments. Have been daily driving Arch Linux distribution. Understands the importance of version control (git) and automated testing, and how to use them in software development (e.g. TDD). Hands-on experience of different parallel computing techniques (GPU (CUDA, SYCL, Vulkan), MPI, simd and OpenMP) and understands the underlaying hardware and how to optimize for it. Can write Python and Bash from scripts to larger programs.