SC24 Atlanta, GA | hpc creates.

CARPINCHOS

unc Universidad Nacional de Córdoba

supercómputo

MILAGROS CARABELOS

MPI • OPENMP

A computer science student with a growing interest in high-performance computing (HPC) has recently started exploring the field. After developing a strong fascination with operating systems, this curiosity has led to a deeper dive into HPC, driven by a desire to learn and expand knowledge in this area.

LARA KURTZ

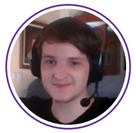
BENCHMARKS

Passionate about coding, Linux, and understanding every low-level detail. Always exploring new ways to automate and optimize workflows. Fueled by a blend of coffee and music.

JAVIER MERCADO ALCOBA

BENCHMARKS

A physics student with a passion for High-Performance Computing (HPC), fascinated by its potential to solve complex problems efficiently and accelerate scientific analysis. They are constantly seeking new ways to innovate and push the boundaries of scientific knowledge.



ALVARO ROY SCHACHNER

COMPILATION

Loves automation and scripting. Interested in low-level programming, computer graphics, compilers and computational astronomy. Lives struggling with compiler errors.

ALEJANDRO ISMAEL SILVA

PROVISION

A computer science student who, after gaining experience in full stack development, found his passion in HPC. He often thinks about the intrinsic parallelism of society and the universe. Since he is terrible at dancing, he is now taking singing lessons.

THE STRENGTHS

The team is composed of both returning experienced members and new members from diverse backgrounds.

Some are deeply interested in low-level programming and system optimization, others bring experience in software development and infrastructure management. Among our new members is a physicist eager to explore HPC's real-life applications in scientific research. Competitions like IndySCC have already allowed us to gain valuable hands-on experience, and we're eager to continue learning and growing.

One of our key strengths is adaptability, driven by necessity. Argentina's economic constraints force us to innovate with minimal resources. With no access to funding for external services, we build everything from the ground up, giving us a deep, hands-on understanding of the technologies and systems we work with.

THE ADVISORS

CARLOS BEDERIAN

RSE at UNC Supercómputo

NICOLAS WOLOVICK

Professor at FAMAF, UNC
UNC Supercómputo Director

THE STRATEGY

Keep learning

- Attend all IndySCC webinars to deepen our understanding of applications and fine-tune input parameters.
- Engage in hands-on exercises with UNC Supercómputo clusters, compiling different builds with Spack and testing performance.
- Research and review HPC concepts, attending courses and exploring topics like libraries, compiler flags, and architecture selection.

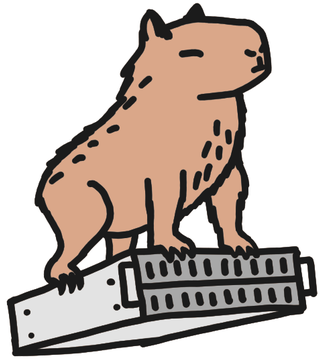
Working together

- Weekly meetings with our coach to review tasks and discuss webinar insights.

Using software we trust

- Ansible for deploying and automating infrastructure tasks.
- Spack + environment modules to manage builds and variants.
- SLURM for job scheduling and resource management.

THE TOOLBOX



ANSIBLE

slurm workload manager

ENVIRONMENT MODULES