

Not-So-Slow Slugs



Team Members

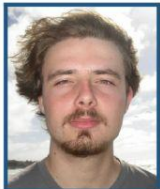


Tu Lan Tran (Captain)

Major: Applied Math

Minor: Computer Engineering

Interests: Computational Algorithms,
AI, Logic Synthesis



Myles Hallett

Major: Computer Science

Minor: Applied Math

Interests: Scientific
Computing



Holden Martinez

Major: Robotics Engineering



Andrew Barth-Yi (Coach)
Computer Engineer Master



Caleb Lin

Major: Computer Engineering,

Robotics Engineering

Minor: Electrical Engineering

Interests: Simulations



Julien Lee

Major: Applied Math,

Computer Engineering,

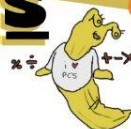
Interests: Fluid Dynamics,

Dynamical Systems



Tao Sato-Perry

Major: Applied Math



Welcome to UCSC's team, Not-So-Slow Slugs! Over the past month and a half, we organized weekly meetings to review and update our current progress on the practice tasks. Despite our members being new to HPC, we have managed to learn about networking, compilers, and the various toolchains for HPC with the help of our team mentor. Consequently, each member has been caught up to speed with techniques for HPC. So, even though we still don't know anything, we are *cooking*.

The Not-So-Slow Slugs are comprised of many diverse backgrounds, bringing life into the team. When we are not living off Caleb and Julien's dining hall points, we are sharing our eclectic spread of knowledge. The applied math students help the team understand the analytical computations working underneath the HPC applications; the computer science and engineering majors have a specialized understanding of hardware and optimization methods. Our collective efforts fill in each other's blind spots, making an infallible team.

Tasks: We were able to configure, build, and run Task 1. We have the training data and are working on parsing it to calculate the mean. This has taught us a lot about troubleshooting, tracking dependencies, and how to use Globus. Our progress continued with Task 2, which added a new layer of complexity and learning. To get the program running, we had to configure the environment with the necessary NVIDIA components. This exercise was a valuable introduction to GPU computing, allowing us to successfully execute the task on the A100 GPUs and expand our skillset beyond traditional CPU architectures.

Resource Management: We have not had to worry too much about SU's due to the generous allocation. We collaborate on instances whenever we can to ensure the maximum limit isn't reached. For now, we've been using the official Ubuntu images since the Nvidia support is most compatible with it, and spack and the aptitude package manager have been our main tools to install dependencies for the projects.

Strategy: Since we are all relatively new to HPC, we have been responding to errors in a straightforward manner by installing libraries and packages, making sure things are in expected directories, and most critically, stalking the issues tab in the git hub repository for any leads. We have been using default configurations on large or XL JS2 flavors during meetings only, while smaller flavors, if we're exploring independently.

type smoke

