Summer Internship - HPC Performance monitoring and analysis

Are you looking for a summer internship where you can acquire valuable experience by being a part of the journey to create a world unique "Globe in 3D" based on satellite imagery? Would you like to learn and develop your skills while working with cutting edge technology together with highly competent colleagues in a global context? This might be the position for you!

Maxar is currently seeking summer interns to join our R&D center in Linköping, Sweden.

Our company
Maxar is a leading Space Technology and intelligence company. We unlock the promise of space to help governments and businesses solve problems on Earth and beyond.

Our solutions
Visualize, analyze, plan and decide—with dynamic 3D data. We build the Globe in 3D using the highest-quality imagery and our revolutionary 3D production process. Our products are sensor agnostic, require no ground control points, provide 50 cm resolution and maintain an absolute accuracy of 3 m.

Background
Maxar Sweden is centered around processing large amount of data on the HPC cluster, it is of importance that we utilize the HPC cluster efficiently. In order to do so, we need to provide SLURM with as accurate as possible resource estimations for our jobs and be able to monitor the HPC cluster’s performance. Therefore, we want to be able to in real-time monitor the throughput of the HPC cluster, so that we can verify whether we use it efficiently or not.

The assignment
• Investigate and research how to calculate a throughput of the Maxar cluster, and if there are several different ways to calculate the throughput, determine which is most suitable for Maxar. In this stage it is also important to learn how our workload manager works and what job data it reports from the HPC cluster. Particularly useful will be learning what data the dispatcher can access and calculate.
• Add functionality to the workload manager web interface. This functionality should include visualization of the throughput of the SLURM cluster in real-time.
• The workload manager web service stack consists of a Node.js server as a backend and React as a frontend, and the interns would preferably have experience in these two.

Preferred qualifications
Master of Science student with experience in C++, Phyton and JavaScript.

For more information about the internship contact
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