Performance engineering is an essential process for sustainably improving the use of HPC resources. System-wide, job-specific monitoring, which records, analyzes and visualizes characteristic data of all jobs on a system as an automated process plays a decisive role. Using simple analysis, both the job metadata and the performance behavior can be used to detect pathological cases, such as incorrect or unsuitable job allocations or excessive idle times. As a result, users can be actively addressed with targeted tips for improvement.

This project aims at developing such a system for the HPC-clusters at the Paderborn Center of Parallel Computing. Depending on the interests and abilities of the student not all parts of the project have to be realized by the student.

**Recommended Skills:**
- Basic database- and web-development for interactive web pages
- Desirable: data visualization, especially for timeline data

**Initial Resources:**

**Supervisor:**
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For more information please visit:
http://cs.uni-paderborn.de/hit/teaching/student-projects/open-theses-topics/