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GPUs: What language do you speak?[1] TIFFANY PROSSER, LARRY ENGELHARDT, Francis Marion University — We present the results of an undergraduate research project that explores the use of Graphics Processing Units (GPUs) for scientific computing. In recent years GPUs have become popular for scientific computing due to their ability to provide massive parallelism (with thousands of cores) at a reasonable price. Since GPUs are still relatively foreign to most people, we present a comparison of a few basic GPU programming languages. These languages include CUDA and OpenACC. CUDA C is an extended version of C/C++. OpenACC (accULL and PGI) is a programming standard that allows FORTRAN and C/C++ programmers to easily take advantage of CPU/GPU systems.

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