Cade Brown

Undergraduate at University of Tennessee, Knoxville

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EXPERIENCE

- **Innovative Computing Laboratory**
  Research Assistant - Knoxville, USA (2019-)
  Ported the MAGMA project to HIP, and improved dense linear algebra (DLA) algorithms for use on AMD GPU hardware.

- **ORNL::OLCF**
  Research Intern - Oak Ridge, USA (2016-2017)
  Took charge of the SimpleSummit (aka Leconte) project under the OLCF, which is the successor to 'Tiny Titan'. I specifically handled the visualization software and part of the physical design.

- **Agilaire**
  Project Contractor - Knoxville, USA (2015)
  Worked on a low-cost and small form-factor data logger solution for air quality monitoring, which runs on a Raspberry PI. The project is called 'pilog'

EDUCATION

- **B.S. Computer Science (CGPA: 3.55/4)**
  University of Tennessee Knoxville
  In-Progress, Expected 2023

AWARDS & RECOGNITION

- **Intel ISEF Finalist**
  Intel ISEF (2018)
  Qualified after winning Grand Reserve Champion at SASEF

- **Intel Excellence in Computer Science Award**
  SASEF (2018)
  Awarded for my submission in SASEF

SKILLS

- **Technologies**
  C, C++, Python, JavaScript, kscript, WASM, OpenMP, CUDA, HIP, Google Cloud Platform (GCP), git/GitHub, Jekyll/Liquid, Django, Flask, NumPy, Tensorflow

- **Patterns & Practices**
  Object Oriented Programming, Functional Programming, Continuous Integration, Version Control

- **Project Management**
  Scrum, Agile, Kanban, Leadership skills

PROJECTS

- **MAGMA** `[icl.cs.utk.edu/magma]`
  A FOSS library aimed at HPC dense linear algebra on many-core, GPU, and multi-GPU platforms
  I work as a maintainer
  C, C++, CUDA, HIP

- **kata** `[kata.tools]`
  A dynamic, cross-platform programming framework, with a rich standard library. I am the primary author
  C, Makefile, CI/CD

- **MPFR** `[mpfr.org]`
  A FOSS library for arbitrary precision math. I have contributed the Beta function, and some test routines.
  Used in GCC
  C