Douglas ("Doug") Raymond Davis

Email: ddavis@ddavis.io
Web: https://ddavis.io
GitHub: douglasdavis
LinkedIn: douglasrdavis

Experience

- **Open Source Software Engineer** March 2021 — Present

  Anaconda, Inc.

  - **Software Engineer** in Anaconda's Open Source Collection; working on open source software projects in the Scientific Python ecosystem, especially in the Dask ecosystem.
  - **Developer** of multiple Dask related projects: dask-awkward and dask-histogram; also contributing patches to core Dask projects.

- **Graduate Student Researcher & ATLAS Experiment Collaborator** 2014 — 2020

  Duke University & CERN

  - **Lead data analyst** measuring the production of a rare physics process with significant background: developed data analysis infrastructure for processing terabytes of data; developed a machine learning pipeline (boosted decision trees) for identifying rare events and implemented its training and inference into batch production; performed statistical tests comparing experimental observations against theoretical models. *Dissertation research*.
  - **Deputy coordinator** of the Transition Radiation Tracker sub-detector software group: co-lead collaboration software team; developed and maintained data analysis API, oversaw junior student projects focusing on maintenance of existing particle identification tools and prototyping machine learning (deep neural network) methods.
  - **Graduate student mentor** to multiple undergraduate researchers: guided undergraduate students on software projects ranging from building graphical event displays to training deep neural networks.
  - **Teaching Assistant** for undergraduate courses in Duke Physics Dept.

Education

- **PhD in Experimental Elementary Particle Physics** Graduated November 2020

  Duke University, Durham, NC, USA

- **BS in Physics (with Special Honors)** Graduated May 2014

  The University of Texas at Austin, Austin, TX, USA

Computing

- **Proficient Programming**: C++, Python.
- **Experience with**: Bash, C, Clojure, Emacs Lisp.
- **Operating Systems, Libraries, and Tooling**: Unix/Unix-like OSes, the SciPy/PyData stacks (Dask, NumPy, Matplotlib, Pandas, Scikit-learn, SciPy, etc.), pybind11, conda(-forge), ROOT, Boost, OpenMP, Emacs, Git, CMake, LaTeX, Sphinx, HTCondor, Docker, continuous integration/testing.
- Multiple open source software projects can be found on my GitHub linked above.

Mentoring, Outreach

- North Carolina Science Festival, State-wide Star Party telescope operator.
- Physics Dept. peer mentor at The University of Texas at Austin.