James R. Castle

CONTACT INFORMATION

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SUMMARY

- 5+ years of experience in Big Data analytics at the European Organization for Nuclear Research Large Hadron Collider (CERN LHC)
- Example analysis projects can be found at https://github.com/jrcastle
- Skilled in multiple programming/scripting languages, including C++ and python

EDUCATION

University of Kansas, Lawrence, KS
Ph.D. in Physics 2017

Northern Kentucky University, Highland Heights, KY
B.S. in Physics and Mathematics 2012

PROFESSIONAL EXPERIENCE

Graduate Research Assistant 2013–present
Physics and Astronomy Department, University of Kansas

- Formulated original scientific research that led to 1 conference presentation and peer-reviewed publication
- Spearheaded and deployed autonomous data-driven calibration workflows, which have vastly improved the quality of 4+ petabytes of data collected at the CERN LHC, used for analyses resulting in 10+ publications
- Successfully mentored next-generation researchers to operate and maintain calibration workflows for future data acquisition
- Contributed to novel software development cycles of the open-source Compact Muon Solenoid Software project at https://github.com/cms-sw/cmssw

Graduate Teaching Assistant 2012–2013
Physics and Astronomy Department, University of Kansas

- Instructed three introductory physics lab sections per semester
- Volunteered to provide weekly recitation sections for students struggling with the course material

TECHNICAL SKILLS

Statistical Analysis: Unfolding/deconvolution, hypothesis testing, Monte-Carlo simulation, linear regression, multivariate analysis
Programming/Scripting Languages: C++, Python, Unix/Linux shell, Mathematica, MATLAB
Source Control Systems: Git, SVN
Databases: SQL
Applications: LaTeX, Microsoft Excel, Microsoft PowerPoint
Operating Systems: OS X, Unix/Linux, Windows

HONORS AND AWARDS

Honors distinction in final Ph.D. defense, University of Kansas 2017
Honors distinction in Ph.D. candidacy exam, University of Kansas 2015
Outstanding Graduate Teaching Assistant, University of Kansas 2013
Outstanding Senior in Physics, Northern Kentucky University 2012
Outstanding Senior in Mathematics, Northern Kentucky University 2012
Greaves Undergraduate Research Fellowship, Northern Kentucky University 2010