# James R. Castle

| | | |
|---|---|---|
| **CONTACT INFORMATION** | 151 S Locust Hill Dr.<br>Apt. 1104<br>Lexington, KY 40517 | *Mobile*: (513) 390-2634<br>*E-mail*: jrcastle90@gmail.com<br>*Webpage*: www.drjcastle.com<br>*LinkedIn*: linkedin.com/in/jrcastle90 |

**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, multivariate analysis
**Machine Learning:** Supervised learning, linear regression
**Programming/Scripting Languages:** C++, Python, Unix/Linux shell, Mathematica, MATLAB, Octave
**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 |