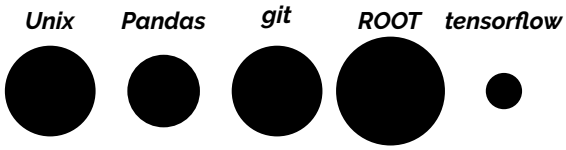
RYAN HANNIGAN

Data Analyst

North Austin
+1 832 465 1323
ryan@hannigan.xyz
hannigan.xyz
github.com/rhanniga
@astrophysiic

WHO AM I?

Particle physics PhD student at the University of Texas at Austin. Data analyst/software developer for the ALICE experiment at CERN. Current work involves writing firmware and software for the 2020 LHC hardware upgrade, but my analysis topic involves strange-antistrange angular correlations in p-Pb collisions at ALICE. Mostly interested in data analysis/machine learning.



EXPERIENCE

2017 – present
Data Analyst — **ALICE at CERN**
Analyze proton-lead data from the Large Hadron Collider (LHC) to investigate two dimensional angular correlations between strange and anti-strange quark pairs, which is pertinent to understanding Quantum Chromodynamics (QCD). Analysis mostly performed using (Ali)ROOT.
`C++ / ROOT / Python`

2015 – 2019
Software/Firmware Developer — **ALICE at CERN**
Developed firmware and software for ALICE detector upgrade. Wrote VHDL to add detector health modules to readout hardware, and wrote Python/C++ to test the readout hardware and characterize the detector parts as they were being assembled.
`C++ / QT / Python / VHDL`

2018 – 2019
part time
Web Designer — **UT Austin**
Wrote the skeleton of a web database used to store testing information for readout equipment being built for ALICE ITS upgrade.
`HTML / PHP / JS / mySQL`

EDUCATION

2017 - 2022
Doctorate Degree — **University of Texas at Austin**
Currently in 3rd year of PhD program. Working towards a PhD in Relativistic Heavy Ion Physics/Nuclear Physics. Recipient of Graduate Provost's Excellence Fellowship, valued at over $240,000. Current completed courses include General Relativity, QFT, Physics of Sensors and all core courses.

2012 – 2017
Bachelor's Degree — **University of Houston**
Received BS in both Physics and Mathematics at the University of Houston. Graduated Magna Cum Laude, and was #1 in the Physics Department. Advanced physics courses included Astrophysics, Quantum Field Theory, Devices and Sensors. Advanced math courses included Advanced Linear Algebra, Advanced Partial Differential Equations, Numerical Analysis.

LEADERSHIP

Teaching Assistant 2018-2019, UT
Physics Lecturer 2017, UH
Math Facilitator 2016-2017, UH
Physics Facilitator 2014-2017, UH

HOBBIES

I love playing piano, running, playing games (mainly CS:GO), coding, and I'm a huge fan of math puzzles or riddles. I also enjoy learning new things about Vim, the greatest text editor.

FUN FACTS

I currently play for the UT Varsity CS:GO team and am the only graduate physics student in the entire league. I also have synesthesia, so I hear colors.