

GUY ROSIN

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EDUCATION

- University of Massachusetts Amherst, Amherst** 2021
PhD in Particle Physics
Department of Energy's Science Graduate Student Research Program award
- University of Massachusetts Amherst, Amherst** 2017
Masters in Particle Physics
USAtlas Center (ATC) award
- Boston University, Boston** June 2015
B.A. in Physics & Astronomy
Overall GPA: 3.60/4.0

EXPERIENCE

- CERN, University of Massachusetts** August 2018 - Present
Research Scientist Amherst, MA
- Analysis of data from Large Hadron Collider to measure the differential cross section of Higgs Boson decay to WW to lepton vertices
 - Used machine learning techniques to reconstruct particle distributions at truth level from detector data.
 - Optimized control regions for background estimation using boosted decision trees. Estimated signal yield with a simultaneous statistical fit using RooFit.
 - HTCondor to parallelize data analysis tasks on CERN computing cluster
- Brookhaven National Lab** May 2017 - August 2019
Software Developer Upton, NY
- Research on the Atlas Inner Tracker, analyzed detector performance using python scientific libraries and put together plans for production QC
 - Wrote software framework to do QC for silicon modules, using Flask backend, Javascript/jQuery/React front end
 - Used postgresSQL and influx databases to store QC data, Grafana to visualize results from QC tests.
 - Used raspberry pi to control and monitor data control systems. Python backend to read I²C sensors and pyserial library to automate power supplies and cooling systems.
- NA62** February 2014 - August 2014
Research Scientist Geneva, Switzerland
- Created Kalman Filter based algorithm to reconstruct particle tracks through a spectrometer.
 - Used ROOT, C++ to visualize and communicate results to NA62 collaboration

TECHNICAL STRENGTHS

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| Programming Languages | C++, Python, Java, Javascript |
| Libraries & APIs | ROOT, Numpy, Pandas, Tensorflow, Flask, jQuery, React |
| Databases | MySQL, PostgreSQL, InfluxDB, Graphite |
| Tools | Git, Docker, Emacs, Excel, Linux, Windows, Grafana, Tableau. |