

Uzziel Perez

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EDUCATION

UNIVERSITY OF ALABAMA

PHD IN PHYSICS

Expected Dec 2021 | Tuscaloosa, AL
Cum. GPA: 3.84/4.0

UNIVERSITY OF THE PHILIPPINES

GRADUATE COURSES IN PHYSICS (PART-TIME)

ATENEO DE MANILA UNIVERSITY

BS IN PHYSICS

March 2012 | Quezon City, Philippines
Cum. GPA: 3.24 / 4.0

LINKS

github.com/uzzielperez
[linkedin.com/in/uzzielperez25](https://www.linkedin.com/in/uzzielperez25)

COURSEWORK

GRADUATE

High Energy Physics (A), QFT III (A)
General Relativity (A), Cosmology (A)
Mechanics (B), Statistical Physics (A)
EM I, II (A, B)

CERTIFICATION

Neural Networks and Deep Learning
Coursera, September 2017
Convolutional Neural Networks
Coursera, March 2018

SKILLS

PROGRAMMING

Experienced:
Python • C++ • \LaTeX
Familiar:
Shell • Mathematica

FRAMEWORKS

Deep Learning:
Keras • Tensorflow
Data Analysis
ROOT

LANGUAGES

Fluent
Filipino • English
Intermediate/Beginner
German • Japanese • Spanish • French

EXPERIENCE

UNIVERSITY OF ALABAMA TEACHING ASSISTANT |PH 102(106)

ELECTROMAGNETISM (CALCULUS-BASED)

August 2016 – Present | Tuscaloosa, AL

- Instructor for laboratory and problem solving classes for undergraduate students.

CERN | SUMMER STUDENT

June-August 2015 | Geneva, Switzerland

- Helped with the calculation photon fake rates for background estimation in the CMS detector endcaps.
- Contributed runnable examples for Everware. It launches Jupyter notebooks from a git repository with the idea of promoting re-usable science for the CERN Summer Webfest.

THE MIND MUSEUM | SCIENCE EDUCATION OFFICER

March 2012 - September 2015 | Bonifacio Global City, Taguig, Philippines

- Science Communicator. • Soccer Science Program Leader. Helped sponsored public school students to learn about human anatomy, statistics, physics, within the purview of football/soccer. • Co-lead of the MakerSpace Program. Taught arduino programming, 3D printing and basic circuits. Also lead the production of a working prototype of a portable desalinator with Palawan State University.

RESEARCH

CMS CERN |SEARCH FOR NEW PHYSICS WITH HIGH MASS DIPHOTONS

Jan 2018– Present | Tuscaloosa, AL

I was responsible for preparing the generator settings for the signal samples consisting of multiple parameter points. These points are in regions of phase space that have yet been excluded by the data that have been collected so far from the Large Hadron Collider (CMS) since 2012. I was also responsible for the regular monitoring of data versus our montecarlo simulated backgrounds. This includes analyzing specific detector conditions that may affect the data and our analysis.

TALKS, SCHOOLS, WORKSHOPS

A Dark Matter Summer School

(DMSS: Talk on Extra Dimensions)

University at Albany, SUNY, New York

July 16-20, 2017

Computational and Data Science for High Energy Physics (CoDaS-HEP)

Princeton University, New Jersey

July 10-13, 2017

Data Science in High Energy Physics (DS@HEP)

Fermi National Accelerator Laboratory (FNAL), Illinois

May 8-12, 2017

CMS Data Analysis School

National Taiwan University, Taipei, Taiwan

February 2016

CERN School Philippines

University of the Philippines, Diliman, Quezon City

March- April 2014

INVITED TALKS

Introduction to Particle Physics, Philippine Science High School, 09/2015 • Seminar on Robotics, Jupyter Notebook, San Pablo City Science High School, December 2015