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

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 ponsored 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. In Fall 2018, I have been involved with rewriting the CMS online workbook for Electron and Photon Analysis using the latest software for LHC Run II analyses.

TALKS, SCHOOLS, WORKSHOPS

A Dark Matter Summer School
(DMSS: Talk on Extra Dimensions)
University at Albany, SUNY, New York — July 16-20, 2018

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