Peter D. Thompson

Contact Information

195 Seaton Street, Apartment 2
Toronto, Ontario M5A 2T5
Phone: (416) 668-6957
Email: peter.thompson2881@gmail.com
Linkedin: www.linkedin.com/in/Peter-Thompson-Toronto
Github: https://github.com/petethegreat
Website: https://petethegreat.github.io

Education

- **PhD in Experimental Particle Physics, University of Toronto, 2006 - 2013**
  Analysed a vast dataset during my PhD research (measurement of the inclusive jet cross section using ATLAS at the LHC).
- **MSc in Theoretical Particle Physics, 2005 - 2006, University of Toronto**
- **BSc (Hons) in Space Physics, 2000-2003, University of Otago, New Zealand**
  Built a simulation in MATLAB to model the electric field induced at the Earth's surface by fluctuations in the geomagnetic field.
- Currently taking Data Science specialisation from Johns Hopkins University on Coursera.org

Employment History

- **Physicist - Bayer Healthcare, 2014 - 2017**
  Ran Monte Carlo simulations to estimate radiation dose received by patients undergoing CT examinations. In addition to developing the simulation, I analysed both simulation results and real dose data that I collected in the field. Conducted other studies also, such as analysing NHANES data to gain insight into population height and weight demographics. Also retrieved and parsed photon cross section information from NIST XCom website using Python.
- **Teaching Assistant - University of Toronto - 2005-2009**
  During my studies at University of Toronto, I facilitated laboratory sessions and led tutorial sessions for undergraduate engineering students. This work involved discussing complex physical concepts and technical issues with students. I was nominated for a teaching award for this work.

Skills

- Over 10 years experience with C++ (GEANT4, gdcm, vtk, ROOT)
- Experience extracting, cleaning, and transforming data
- Predictive modelling using linear regression and Machine Learning methods (caret, scikit-learn)
- Python (pandas, numpy, matplotlib,seaborn, requests,Django) and Perl (lwp,DBI)
- R (ggplot2, dplyr, knitr, caret)
- SQL (postgres, sqlite3)
- LaTeX(beamer)
- Bash scripting and linux/unix tools (e.g. grep, awk, sed, etc.)
- Version control software (svn, git)

references available upon request