

Matthew Napaqtuk Kancewick Smith

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WORK EXPERIENCE

- City of Boston** – Department of Innovation and Technology Boston, MA
Principal Data Scientist October 2018 – present
- Leading cross-department team in wide range of data-driven projects (e.g. climate resilience, housing policy)
 - Developing analysis and predictive modeling techniques to assist city departments with research/operations
 - Head and founder of Boston’s Ethical Data Working Group
- Harvard University, Extension School and Northeastern University, CPS** Cambridge/Boston, MA
Adjunct Lecturer, Data Analytics and Visualization June 2020/February 2019 – present
- Northeastern Data Analytics Master’s: adapted curriculum, trained TAs, teaching lecture
 - Harvard Data Science Master’s: developed curriculum, managed team of TAs, taught lecture
- Oceana** (Global ocean conservation NGO) – Europe Office Madrid, Spain
Data Scientist May 2017 – September 2018
- Predictive modeling of illegal fishing in the EU through application of big data and machine learning
 - Analyzed the potential economic impact of curbing overfishing in the EU (+€4.9bn, +92k jobs)
- CERN** (European Organization for Nuclear Research) – **ATLAS Detector** Geneva, Switzerland
PhD Researcher June 2013 – May 2014, February 2015 – December 2016
- Created and managed very large (~200 TB) datasets containing particle collision and decay information
 - Developed a data-driven model to test particle collisions for the existence of supersymmetry using clustering algorithms to identify and target the output with greatest potential for discovery

EDUCATION

- Columbia University** New York, NY
PhD in Particle Physics May 2017
Thesis: “Searching for SUSY phenomena in final states with high jet multiplicity at the ATLAS detector”
Teaching Fellow (2011-13). Only graduate student (out of ~50) selected to teach advanced engineering lab
- Perimeter Institute for Theoretical Physics**, University of Waterloo Waterloo, Ontario
MSci in Theoretical Physics June 2011
- Yale University** New Haven, CT
B.S. in Physics, Honors track (Intensive Physics) May 2010

HONORS & AWARDS

- National Science Foundation Grant (2013-2016)
Perimeter Scholars International Fellowship (2010-2011)
Yale Deforest Pioneers Prize “for distinguished creative achievement in physics” (2010)
Yale Society of Physics Students, President (2009-2010)

SELECTED PUBLICATIONS

- Smith, Matthew N.K., *Using big data to evaluate MPA effectiveness – the case of reefs in EU*. **European Commission on the Environment, Marine Biogeographic Seminar** (2018).
- ATLAS Collaboration, *Search for new phenomena in final states with large jet multiplicities and missing transverse momentum with ATLAS using $\sqrt{s} = 13$ TeV proton–proton collisions*, **Phys. Lett. B** 757 (2016) 334.
- ATLAS Collaboration, *Performance of pile-up mitigation techniques for jets in pp collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector*, **Eur. Phys. J. C** (2016) 76:581.

SKILLS

- Languages:** English (native), Spanish (fluent), French (basic).
Coding: Python (esp. pandas, scikitlearn, folium, other data science pkgs), SQL, R, proficient with C++, MatLab.

EXTRACURRICULAR ACTIVITIES

- Violin/Fiddle:** Lifelong musician, performing solo and in ensembles in many styles (most recently the UN Orchestra and the Geneva Irish trad band “The Emigrants”), as well as teaching violin and improvisation
- Ultimate Frisbee:** 10 years of club-level competition the US, Canada, and Europe. Competed in the 2016 World Championships in London with the Swiss national team.