Ronan Perry

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Education

Johns Hopkins University — *Baltimore, MD*
M.S.E. Biomedical Engineering — *May 2020*

- **Concentration:** Biomedical Data Science
- **Thesis Title:** *Manifold-aware Forests: Closing the Gap to Neural Networks*
- **GPA:** 4.0/4.0

Johns Hopkins University — *Baltimore, MD*
B.S. Applied Mathematics & Statistics — *Dec 2019*

- **GPA:** 3.93/4.0
- Dean's List: 2016-2019

Technical University of Denmark — *Copenhagen, DK*
Study Abroad Experience — *Fall 2018*

Research Experience

NeuroData Lab, Johns Hopkins University — *Baltimore, MD*
Research Assistant — *Jan. 2019 - Current*
Ran experiments and proved theory related to a oblique random forests. Conducted dimension reduction and statistical independence analyses on fMRI datasets. Developed a *Python* package to aid in the aforementioned work.

Medical Image Processing Lab, Ecole Polytechnique Federale de Lausanne — *Geneva, Switzerland*
Research Intern — *May 2018 - Aug 2018*
Created automated image segmentation pipeline in MATLAB to expedite analyses. Identified spatial correlation patterns in processed fMRI data.

Popel Systems Biology Lab, Johns Hopkins Medical Institute — *Baltimore*
Research Assistant — *Sept 2018 - Dec 2018*
Collected data on NSCLC from literature and fit a PKPD MATLAB model.

Fei Lab, Boyce Thompson Institute — *Ithaca NY*
Research Intern — *June 2015 - Aug 2015*
Developed Perl and Bash scripts and identified genetic recombination hotspots.

Professional Experience

Rheonix Inc. — *Ithaca, NY*
Software Development Intern — *May 2017 - Aug 2017*
Optimized an image classification model. Analyzed software logs to identify sources of hardware failure.

Earth & Planetary Sciences, Cornell University — *Ithaca, NY*
Temporary Service Technician — *Aug 2016 - Sep 2016*
Created tool to automatically cross reference video footage of natural landscapes and data of those landscapes.

URSA Space Systems — *Ithaca, NY*
Software Development Intern — *Apr 2016 - Aug 2016*
Created combinatorial optimization model in Java to predict matches between AIS signals and satellite imagary of ships.

Teaching

2019	**Teaching Assistant**, Applied Math 430: Intro to Statistics	*Johns Hopkins*
2018	**Teaching Assistant**, Applied Math 420: Intro to Probability	*Johns Hopkins*
2017	**Group Tutor**, Multivariate Calculus	*Johns Hopkins*
2018-19	**SPLASH Teacher**, Planned and taught custom Classes for local high schoolers	*Johns Hopkins*

Awards

2020	**Fellow**, Impact Fellowship	*NYC*
2019	**1st Place**, IDIES Machine Learning Visualization Hackathon	
2018	**4th Place**, HopHacks Data Science Challenge	

Presentations

Baltimore Innovation Week *Baltimore, MD*

Using Google Maps API to map and visualize health clinic accessibility in Baltimore *Oct. 2017*

Software

mvlearn A comprehensive and tested *Python* library for multiview learning methods. Available on PyPi and at mvlearn.neurodata.io

Publications

Preprints

[1] **Ronan Perry**, G. Mischler, R. Guo, T. Lee, A. Chang, A. Koul, C. Franz, and J. T. Vogelstein. *mvlearn: Multiview Machine Learning in Python*. 2020. arXiv: 2005.11890 [stat.ML].

[2] **Ronan Perry**, T. M. Tomita, J. Patsolic, B. Falk, and J. T. Vogelstein. *Manifold Forests: Closing the Gap on Neural Networks*. 2019. arXiv: 1909.11799 [cs.LG].

Accepted Conference Abstracts

[1] **Ronan Perry**, L. Daumail, J. Zorn, D. S. Margulies, J. T. Vogelstein, and A. Lutz. *Identifying Differences Between Expert and Novice Meditator Brain Scans via Multiview Embedding*. 2020.