

Ronan Perry

Johns Hopkins University, Baltimore, MD

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Education

Johns Hopkins University

M.S.E. BIOMEDICAL ENGINEERING

Baltimore, MD

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

B.S. APPLIED MATHEMATICS & STATISTICS

Baltimore, MD

Dec 2019

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

Technical University of Denmark

STUDY ABROAD EXPERIENCE

Copenhagen, DK

Fall 2018

Research Experience

NeuroData Lab, Johns Hopkins University

RESEARCH ASSISTANT

Baltimore, MD

Jan. 2019 - Current

Reproducible data science and open source software development related to the theory of random forests and statistical analyses of fMRI data.

Medical Image Processing Lab, Ecole Polytechnique Federale de Lausanne

RESEARCH INTERN

Geneva, Switzerland

May 2018 - Aug 2018

Created automated image segmentation pipeline in MATLAB to expedite analyses and identified spatial correlation patterns in processed fMRI data.

Popel Systems Biology Lab, Johns Hopkins Medical Institute

RESEARCH ASSISTANT

Baltimore

Sept 2018 - Dec 2018

Collected data on NSCLC from literature and fit a PKPD MATLAB model.

Fei Lab, Boyce Thompson Institute

RESEARCH INTERN

Ithaca NY

June 2015 - Aug 2015

Developed Perl and Bash scripts and identified genetic recombination hotspots.

Professional Experience

Rheonix Inc.

SOFTWARE DEVELOPMENT INTERN

Ithaca, NY

May 2017 - Aug 2017

Optimized image classifier and automated hardware failure identification system.

Earth & Planetary Sciences, Cornell University

TEMPORARY SERVICE TECHNICIAN

Ithaca, NY

Aug 2016 - Sep 2016

Created tool to automatically align video and text data.

URSA Space Systems

SOFTWARE DEVELOPMENT INTERN

Ithaca, NY

Apr 2016 - Aug 2016

Improved object recognition algorithm for satellite images and created combinatorial optimization model.

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	Johns Hopkins
2018	4th Place , HopHacks Data Science Challenge	Johns Hopkins

Presentations

Organization for Human Brain Mapping Conference

IDENTIFYING DIFFERENCES BETWEEN EXPERT AND NOVICE MEDITATOR BRAIN SCANS

Virtual

June 2020

Baltimore Innovation Week

USING THE GOOGLE MAPS API TO MAP AND VISUALIZE HEALTH CLINIC ACCESSIBILITY IN BALTIMORE

Baltimore, MD

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*. OHBM, 2020.