

# Ronan Perry

✉ [rflperry@uw.edu](mailto:rflperry@uw.edu) | 🏠 [rflperry.github.io/](https://rflperry.github.io/) | 📄 [github.com/rflperry/](https://github.com/rflperry/)

## Education

### University of Washington

P.H.D. STATISTICS

Seattle, WA

Sept 2022 - May 2027 (expected)

### Johns Hopkins University

M.S.E. BIOMEDICAL ENGINEERING

Baltimore, MD

May 2020

### Johns Hopkins University

B.S. APPLIED MATHEMATICS & STATISTICS

Baltimore, MD

Dec 2019

## Research Positions

### University of Washington

RESEARCH ASSISTANT

Seattle, WA

Sept 2022 - Current

- Supervisor: Daniela Witten
- Selective inference hypothesis test for PCA decompositions.

### Max Planck Institute for Intelligent Systems

FULBRIGHT RESEARCH FELLOW

Tübingen, Germany

Sept 2021 - July 2022

- Advisor: Bernhard Schölkopf
- Developed causal discovery algorithm leveraging sparse changes in multi-environment data.

### Johns Hopkins University

RESEARCH ASSISTANT

Baltimore, MD

Jan. 2019 - July 2021

- Advisor: Joshua Vogelstein
- Developed random forest algorithm for spatial data, images, and timeseries.
- Led team to develop open source ML Python [package](#), unifying multiview tools and formats.
- Developed dimension reduction and hypothesis testing pipeline for multi-level fMRI time series.
- Conducted large scale study of classifier calibration across random forest variants.

## Professional Experience

### Rheonix Inc.

SOFTWARE DEVELOPMENT INTERN

Ithaca, NY

May 2017 - Aug 2017

### Earth & Planetary Sciences, Cornell University

TEMPORARY SERVICE TECHNICIAN

Ithaca, NY

Aug 2016 - Sep 2016

### URSA Space Systems

SOFTWARE DEVELOPMENT INTERN

Ithaca, NY

Apr 2016 - Aug 2016

## Awards

- 2022 **NeurIPS Scholar Award**, Travel funding
- 2021 **Fulbright Finalist**, Research Fellowship
- 2019 **Departmental Honors**, Applied Mathematics & Statistics

Germany  
Johns Hopkins

## Publications

---

### Peer-Reviewed Publications

- [1] **Ronan Perry**, Julius von Kügelgen, and Bernhard Schölkopf. “Causal Discovery in Heterogeneous Environments under the Sparse Mechanism Shift Hypothesis”. In: *Conference and Workshop on Neural Information Processing Systems (NeurIPS)* (2022).
- [2] Adam Li, **Ronan Perry**, Chester Huynh, Tyler M. Tomita, Ronak Mehta, Jesus Arroyo, Jesse Patsolic, Benjamin Falk, and Joshua T. Vogelstein. “Manifold Oblique Random Forests: Towards Closing the Gap on Convolutional Deep Networks”. In: *SIAM Journal on Mathematics of Data Science (SIMODS)* (2022).
- [3] **Ronan Perry**, Gavin Mischler, Richard Guo, Theodore Lee, Alexander Chang, Arman Koul, Cameron Franz, Hugo Richard, Iain Carmichael, Pierre Ablin, et al. “mvlearn: Multiview Machine Learning in Python”. In: *Journal of Machine Learning Research* 22.109 (2021), pp. 1–7.

### Pre-prints

- [1] **Ronan Perry**, Ronak Mehta, Richard Guo, Eva Yezerets, Jesús Arroyo, Mike Powell, Hayden Helm, Cencheng Shen, and Joshua T Vogelstein. “Random Forests for Adaptive Nearest Neighbor Estimation of Information-Theoretic Quantities”. In: *arXiv preprint arXiv:1907.00325* (2021).
- [2] Sambit Panda, Cencheng Shen, **Ronan Perry**, Jelle Zorn, Antoine Lutz, Carey E Priebe, and Joshua T Vogelstein. “Nonpar MANOVA via Independence Testing”. In: *arXiv preprint arXiv:1910.08883* (2021).

## Conferences & Presentations

---

2022	<b>NeurIPS</b> , (Accepted paper and poster)	<i>New Orleans, USA</i>
2022	<b>SIAM Conference on Mathematics of Data Science</b> , (Invited workshop talk)	<i>San Diego, USA</i>
2021	<b>NeurIPS</b> , (Out-of-distribution Learning Workshop Program Committee)	<i>Virtual</i>
2020	<b>Neuromatch</b> , (Accepted abstract and presentation)	<i>Virtual</i>
2020	<b>Organization of Human Brain Mapping</b> , (Accepted abstract and presentation)	<i>Virtual</i>

## Teaching

---

2019	<b>Teaching Assistant</b> , Applied Math 430: Introduction to Statistics	<i>Johns Hopkins</i>
2018	<b>Teaching Assistant</b> , Applied Math 420: Introduction to Probability	<i>Johns Hopkins</i>

## Open Source Software

---

<b>mvlearn</b>	[Owner] A <i>Python</i> package for multiview learning methods. <a href="https://mvlearn.github.io">mvlearn.github.io</a>
<b>honest-forests</b>	[Owner] A <i>Python</i> package for scikit-learn compliant honest decision forests. <a href="https://github.com">Github</a>
<b>hyppo</b>	[Contributor] A <i>Python</i> package for multivariate hypothesis testing. <a href="https://github.com">Github</a>
<b>graspologic</b>	[Contributor] A <i>Python</i> package for modeling and inference on network-valued data. <a href="https://github.com">Github</a>

## Languages & Tools

---

<b>Experienced</b>	Python, $\LaTeX$
<b>Intermediate</b>	R, German, Git
<b>Basic</b>	Bash, Inkscape, Java, MATLAB, Perl