Robin Dunn

Carnegie Mellon University • Pittsburgh, PA 15213 • dunnr@cmu.edu • robinmdunn.github.io

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Education

Carnegie Mellon University   PITTSBURGH, PA

PhD in Statistics   *Aug 2016 – present*

Thesis topic: *Advances in Universal Inference*. Co-advisors: Larry Wasserman, Aaditya Ramdas.
ABD as of July 2020. Expected graduation: Summer 2021. GPA: 4.1.

Master of Science in Statistics   *Aug 2016 – May 2017*

Kenyon College   GAMBIER, OH

Bachelor of Arts in Mathematics, Scientific Computing Concentration   *Aug 2012 – May 2016*

Valedictorian, Highest Honors in Mathematics, Distinction on Mathematics Senior Exercise.
Phi Beta Kappa. GPA: 4.0.

Experience

Carnegie Mellon University Department of Statistics & Data Science   PITTSBURGH, PA

Research Assistant   *Aug 2016 – present*

Research Collaborator for CMU / Novartis Partnership   *Feb 2020 – Sep 2020*

Collaborated on analysis of a personalized medicine cancer treatment, through a partnership between
Novartis Pharmaceuticals and Carnegie Mellon's Department of Statistics & Data Science. Developed
multistate models for patient progression from pre-treatment through follow-up. Consulted with
physicians, statisticians, and biometricians. Presented on twice weekly international conference calls.

Instructor for 36-315: Statistical Graphics and Visualization   *May 2019 – June 2019*

Developed course materials, presented lectures, led labs, and held office hours.
Topics: choosing and interpreting graphics, mastering `ggplot`, interactive graphics with `shiny`.

Head Teaching Assistant for 36-462/662: Data Mining   *Aug 2019 – Dec 2019*
Head Teaching Assistant for 36-402/608: Advanced Methods for Data Analysis   *Jan 2019 – May 2019*
Head Teaching Assistant for 36-315: Statistical Graphics and Visualization   *Aug 2018 – Dec 2018*

Held office hours, led lab sections, graded assignments, coordinated course logistics, filled in for lecture.

Research Mentor for Summer Undergraduate Research Experience in Statistics   *May 2018 – July 2018*

Student advisees: Alexander Asemota, Sophia Hecht, Daniel Rodriguez
Faculty supervisors: Anjali Mazumder, Chad Schafer
Mentored students to identify research directions on data science for justice. Provided guidance on
`R` tools (`ggplot`, `data.table`, shapefiles) and statistical models (generalized linear models, random
forests, spatiotemporal ETAS models). Students presented their final work at a departmental seminar
and at the poster session of the American Statistical Association's 2018 StatFest.

Novartis Pharmaceuticals Corporation   EAST HANOVER, NJ

Biostatistics PhD Intern   *May 2017 – Aug 2017*

Advisors: Peter Mesenbrink (primary), David James, David Ohlssen
Analyzed data from the Osteoarthritis Initiative's ten-year longitudinal database. Constructed pre-
dictive models for knee replacements, explored missing data methods, and applied joint models for
longitudinal and time-to-event data. Presented on several international conference calls.

Kenyon College Office of Institutional Research   GAMBIER, OH

Institutional Research Student Consultant   *Aug 2013 – June 2016*

Analyzed survey data in `R`, wrote reports on statistical findings, hosted focus groups, and interpreted
data to support professors applying for grants. Created a Tableau data visualization of majors and
careers of Kenyon graduates.

Publications

[1] Robin Dunn, Joel Greenhouse, David James, David Ohlssen, and Peter Mesenbrink. Risk Scoring for Time to End-Stage Knee Osteoarthritis: Data from the Osteoarthritis Initiative. *Osteoarthritis and Cartilage*, 2020. URL https://doi.org/10.1016/j.joca.2019.12.013.

[2] Robin Dunn, Larry Wasserman, and Aaditya Ramdas. Distribution-Free Prediction Sets with Random Effects. *arXiv preprint*, 2020. URL https://arxiv.org/abs/1809.07441.
Under review, post major revision at *Journal of the American Statistical Association*.

[3] Niccolò Dalmasso*, Robin Dunn*, Benjamin LeRoy*, and Chad Schafer. A Flexible Pipeline for Prediction of Tropical Cyclone Paths. *ICML Workshop on Climate Change: How can AI help?*, 2019. URL https://www.climatechange.ai/papers/icml2019/14.
*Equal contributions. R package: `TCpredictionbands`.

Honors and Awards

PhD Teaching Assistant of the Year   *May 2019*
Carnegie Mellon University Department of Statistics & Data Science
> Awarded for head TA performance in 36-402/608: Advanced Methods for Data Analysis (Spring 2019).

Gertrude M. Cox Scholarship   *Apr 2016*
ASA Committee on Women in Statistics and Caucus for Women in Statistics
> Awarded yearly to one woman in or entering the early stages of graduate statistical training (MS or PhD) and to one woman in a more advanced stage of training.

Reginald B. Allen Prize   *Apr 2016*
Kenyon College Department of Mathematics & Statistics
> Awarded each year to a student whom the professors of the Department of Mathematics decide has done the most outstanding work in mathematics.

NSF Graduate Research Fellowship   *Mar 2016*
National Science Foundation
> Recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master's and doctoral degrees.

Goldwater Scholar   *Mar 2015*
Barry Goldwater Scholarship and Excellence in Education Foundation
> National award for undergraduate students interested in pursuing scientific research careers.

CAUSE Undergraduate Statistics Class Project Competition, third place   *Jul 2013*
Consortium for the Advancement of Undergraduate Statistics Education
> Won third place in a national competition for a project titled "Studies on Water Components" that used bootstrapping statistical methodology to analyze water sampling data.

Service

Peer reviewer   *2019 – present*
> NeurIPS climate change workshop (2019, 2020), *Journal of Machine Learning Research* (2019)

PhD student mentor   *2018, 2020*

Conference volunteer   *2018 – 2020*
> Women in Data Science (WiDS) Pittsburgh @ CMU conference volunteer

Professional Memberships

- American Statistical Association
- ENAR International Biometric Society
- Institute of Mathematical Statistics