

Jacob Maibach

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Work and Research Experience

University of Arizona

PhD Candidate in Statistics [August 2020 - Present]

- instructor for Intro Statistics (Math 163)
- TA for Intro Biostatistics (Math 263) and College Algebra (Math 112)
- research developing latent variable models for educational data/process data (Bayesian item response models)

Independent Consultant

Data Scientist [June 2019 - July 2020]

- built and analyzed a database for trends in the prevalence of skin allergies for an upcoming publication
- developed an automated system for collecting and classifying news articles to support a content analysis project
- conducted data analysis and visualization to support endpoint development in a phase 2 clinical trial

Trantor / VMWare

Machine Learning Consultant / Cognitive Solutions Developer [January 2019 - June 2019]

- developed end-to-end a text classification micro-service in Python for an employee experience chatbot
- built a dashboard for user feedback and usage data to support continuous improvement of the chatbot

The George Washington University

Research Associate (NSF-funded) STEM Pedagogy [May 2018 - August 2018]

- applied content analysis to produce measures of writing quality
- conducted statistical assessment of inter-rater reliability

NASA/USRA

Project in Satellite Remote Sensing of Air Pollution [June 2017 - April 2018]

- developed a data processing pipeline to produce analysis-ready datasets
- produced visualizations of spatial and temporal data

Astrostatistics Research

[Fall 2017]

- developed a sampling methodology with supporting theoretical results
- research culminated in a 30-page masters thesis

Undergraduate Teaching Assistant

Upper-level course in Experimental Physics

[Spring 2016]

Computational Biology Research

[Fall 2015 - Spring 2016]

- culminated in a 20-page bachelors thesis

Luther Rice Research Fellow

Research in Combinatorial Mathematics

[Summer 2015]

- application included a proposal reviewed by a university-wide selection committee
- research culminated in a 45-page bachelors thesis

Education	The George Washington University	
	MS in Data Science GPA: 3.80	[Fall 2016 - Fall 2017]
	BS in Mathematics and Physics Magna Cum Laude, with Departmental Honors in Mathematics and Physics GPA: 3.75	[Fall 2013 - Spring 2016]
Leadership Experience	Outreach Chair for the George Washington University Society of Physics Students	[Spring 2015 - Spring 2017]
	<ul style="list-style-type: none"> • organized and ran an annual 6-week science workshop series for elementary school students with the after-school program Life Pieces to Masterpieces • coauthored a successful proposal for the Marsh White Outreach Award • developed a feedback system to ensure continued improvement of the outreach program • trained my successor 	
Publications	Elmobdy, K., Maibach, J. , Do, LHD., Maibach, H. (in press). North American Trends in Patch-Test Reactions: 32-year Statistical Overview (1984-2016).	
	Gupta, P., Doraiswamy, P., Levy, R., Pikelnaya, O., Maibach, J. , Feenstra, B., et al. (2018). Impact of California fires on local and regional air quality: The role of a low-cost sensor network and satellite observations. <i>GeoHealth</i> , 2.	
Presentations	Maibach, J. , Kai, Y., Peng, W. “Theoretical Foundations for Clustering Analysis of Transcription Factor Distributions”. Quadrennial Physics Congress, 2016.	
	Maibach, J. “Presentations of Transversal Matroids: Uniform Matroids and Extensions”. The George Washington University Research Days, 2016.	
	Maibach, J. “Transmission of Non-Perpendicularly Incident Light”. April Meeting of the American Physical Society, 2015.	
Awards	Marsh White Outreach Award (2016). Society of Physics Students (national organization). Awarded \$500 to conduct the outreach program of The George Washington University Society of Physics Students.	
	Luther Rice Research Fellowship (2015). Columbian School of Arts and Sciences, The George Washington University. Awarded \$5000 to conduct summer research.	