Patrick **Sadil**

Postdoctoral Research Fellow

Johns Hopkins Bloomberg School of Public Health; Biostatistics

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Experience

Research Fellow - Biostatistics

Johns Hopkins Bloomberg School of Public Health — *July 2021 - Present*

- Built preprocessing and quality control pipeline for multi-terabyte medical imaging datasets (Python, Bash, Docker, git)
- Extracted from images indicators of health outcomes
- Collaborated with engineering teams to deploy pipelines on high-performance compute clusters
- Reported periodically on data to teammates, technical experts, and funders through dashboards and slides (Jupyter, R Markdown)

Research Associate

University of Massachusetts, Amherst — *Sep 2020 - June 2021*

- Formulated custom statistical models for high-dimensional imaging data (Hierarchical Bayesian Regression, Stan)
- Implemented models in distributable software package (R)
- Standardized data sharing practices among coworkers

Researcher

University of Massachusetts, Amherst — *Summer 2016 - Summer 2020*

- Designed experiments based on results of simulation studies
- Collected, analyzed, interpreted, visualized, and reported on experiments
- Organized tutorials for graduate students on best practices in research software development
- Collected data through online platforms (MTurk, Flask)

Teaching Assistant - Graduate Level Bayesian Analyses

University of Massachusetts, Amherst — *Spring 2019*

- Hosted office hours to clarify advanced topics in statistical inference and computing
- Mentored students through capstone projects
- Contributed to design of course assignments and graded student submissions

Teaching Assistant - Research Methods in Psychology

University of Massachusetts, Amherst — *Spring 2016*

- Lectured students on fundamentals of probability, statistics, and research methods
- Maintained office hours to review course content and mentor one-on-one

Active Independent Projects

Probing Biases in Automated Diagnoses from Medical Imaging

$50000 Research grant — *Fall 2021 - Fall 2022*

- Ongoing research on biases in automated predictions of health outcomes from medical imaging data
- Testing generalizability of established machine and deep learning models
- Running analyses on cloud services (Oracle Cloud Infrastructure)

Education

MS, PhD, Cognitive Psychology

University of Massachusetts, Amherst — *2015–2020*

- "Uncovering the Neural and Behavioral Factors That Underlie Changes in Processing Visual Orientation"
- Communicated results and methodologies through published articles and talks to audiences with varied technical backgrounds
- Spearheaded data collection and storage for government grant funded research

BA, Biology

Reed College — *2010–2014*

- $1500 Grant – Thesis Research
- $5500 Grant – Research Fellowship