

# Prachi Mahableshwarkar, Ph.D.

Summary: 5+ years of experience in conducting large-scale experiments, modeling human data (3,000+ participants, custom Python codebase), and leading a cross-functional team to test a virtual reality training system for neonatal residents.

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## Work Experience

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- 2019-2024 | **Doctoral Researcher - Human Visual Cognition, Depth Perception**  
**Quantitative Model of Human Spatial Perception in Images** ([github-repo](#)) (Python, R, HPC, Unity)
- Designed and executed image-based quantitative experiments on 3,000 participants (4 publications, [pre-print](#), [in press](#))
  - Conducted statistical analysis, model testing, and bootstrapped decoding analyses on behavioral responses to depth tasks in images
  - Wrote custom python library to quantify image features using depth data for large batches of images in parallel
- Pipeline for Large-Scale Online Data Collection** (Python, PHP, Javascript/HTML/CSS)
- Built an open-source pipeline that accelerates online data collection by 25x using custom servers (AWS) and data collection platforms (MTurk, Prolific; [code-base](#))
  - Co-authored a paper on large-scale data collection (100x participants) and solving complex research questions through efficient crowd-sourced methods (in press, late Spring)
- 2020-2023 | **Virtual Reality Research Collaborator at Children's National Hospital**
- Developed testing procedures and led data collection to determine the efficacy of a VR/AR training system for neonatal endotracheal intubation
- 2018 | **Intern - Goldman Sachs Organizational Research Team**
- Created data-driven psychology solutions to fix the gender pay gap and promote ethical practices at the firm

## Skills

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*Research:* Statistical modeling (multivariate, psychophysics), experimental design, data analysis, data visualization

*Languages:* Python, R, Javascript, MATLAB, Advanced Statistical Modeling Analysis (SAS), SQL

*Frameworks/Libraries:* Pandas, Git, Pillow (PIL), NumPy, Matplotlib, SciPy, scikit-learn, JupyterLab, Unity

## Education

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- 2024 | **The George Washington University**  
*PhD in Cognitive Neuroscience*
- 2019 | **Carnegie Mellon University**  
*Bachelor of Science in Cognitive Neuroscience, Minor in Human Computer Interaction*

## Leadership Experience

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- 2020-2022 | **Board Member of GWU's Collaborative of Department Equity (CODE)**
- Developed surveys, reviewed syllabi, and organized meetings to advance equity, diversity, and inclusion
- 2021-2024 | **Research Mentor - Brain and Navigation Laboratory**
- Mentored a team of research assistants and developed tutorials on Python, JupyterLab, pandas, and GitHub

## Honors, Awards, and Conferences

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- [3 Minute Thesis winner](#), OPAM 2022 Professional Development Award
- National Honors Society in Neuroscience (Nu Rho Psi), Psychology (Psi Chi), and Mortar Board
- Presented novel [findings](#) to different audiences in 4 presentations at prominent scientific conferences