I am a PhD student in Bioengineering specializing in the intersection of biodesign and machine learning for understanding, treating, and tracking neuropsychiatric conditions.

As a highly interdisciplinary translational researcher, I have several academic interests and my thesis work therefore spans the engineering, design, scientific, algorithmic, and clinical questions associated with developing new technologies to transform healthcare and diagnostics.

Before coming to Stanford, I completed an undergraduate degree in Computer Science at Rice University in Houston, Texas.

EDUCATION AND CERTIFICATIONS

- Master of Science, Stanford University, CS-MS (2018)
- BA, Rice University, Computer Science (2015)

STANFORD ADVISORS

- Jan Liphardt, Doctoral Dissertation Reader (AC)
- Dennis Wall, Doctoral Dissertation Advisor (AC)
- Bo Wang, Doctoral (Program)
- Russ Altman, Doctoral Dissertation Reader (AC)

LINKS

- Personal Site: https://www.peterwashington.net/
- LinkedIn: https://www.linkedin.com/in/washingtonpeter/
- Twitter: https://twitter.com/peter_washing
- Wall Lab profile: https://wall-lab.stanford.edu/people/current/peter/
- Bioengineering profile: https://bioengineering.stanford.edu/people/peter-washington
- Instagram: https://www.instagram.com/scienceinthetrap/
Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am currently a graduate student in Bioengineering specializing in biomedical data science, utilizing techniques from and innovating in crowdsourcing healthcare, applied machine learning, computational psychiatry, translational bioinformatics, human-computer interaction, and mobile/wearable systems.

I have several academic interests and my thesis work therefore spans the engineering, design, scientific, algorithmic, and clinical questions associated with developing new technologies to transform healthcare and diagnostics.

Publications

PUBLICATIONS

- Classifying Autism From Crowdsourced Semistructured Speech Recordings: Machine Learning Model Comparison Study. *JMIR pediatrics and parenting*
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- Improved Digital Therapy for Developmental Pediatrics Using Domain-Specific Artificial Intelligence: Machine Learning Study. *JMIR pediatrics and parenting*
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• Precision Telemedicine through Crowdsourced Machine Learning: Testing Variability of Crowd Workers for Video-Based Autism Feature Recognition. *Journal of personalized medicine*
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• Game theoretic centrality: a novel approach to prioritize disease candidate genes by combining biological networks with the Shapley value. *BMC bioinformatics*
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• The Performance of Emotion Classifiers for Children With Parent-Reported Autism: Quantitative Feasibility Study. *JMIR mental health*
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• Feature Selection and Dimension Reduction of Social Autism Data. *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
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• A Mobile Game for Automatic Emotion-Labeling of Images. *IEEE transactions on games*
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• Data-Driven Diagnostics and the Potential of Mobile Artificial Intelligence for Digital Therapeutic Phenotyping in Computational Psychiatry. *Biological psychiatry. Cognitive neuroscience and neuroimaging*
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- **Scientific Discovery Games for Biomedical Research.** *Annual review of biomedical data science*
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- **Effect of Wearable Digital Intervention for Improving Socialization in Children With Autism Spectrum Disorder A Randomized Clinical Trial** *JAMA PEDIATRICS*
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- **Detecting Developmental Delay and Autism Through Machine Learning Models Using Home Videos of Bangladeshi Children: Development and Validation Study** *JOURNAL OF MEDICAL INTERNET RESEARCH*
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- **Identification and Quantification of Gaps in Access to Autism Resources in the United States: An Infodemiological Study.** *Journal of medical Internet research*
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• Rethinking the Imaging Pipeline for Energy#Efficient Privacy#Preserving Continuous Mobile Vision


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- **ScaleMed: A methodology for iterative mHealth clinical trials** *17th International Conference on E-health Networking, Application & Services (HealthCom)*
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