Bio

I am a PhD student in Bioengineering specializing in the intersection of human-computer interaction with health technology and biotechnology, utilizing techniques from and innovating in citizen science/healthcare, social computing, bioinformatics, augmented reality, and mobile/wearable systems.

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)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am interested in how techniques from human-computer interaction (crowdsourcing, ubiquitous/wearable computing, and data visualization) can be applied to various problems in the health and the life sciences. I ultimately hope to merge the worlds of interactive computing with bioengineering to create algorithms and systems which can be used by scientists and bioengineers.

Publications

PUBLICATIONS

- **Validity of Online Screening for Autism: Crowdsourcing Study Comparing Paid and Unpaid Diagnostic Tasks.** *Journal of medical Internet research*  
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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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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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Mobile detection of autism through machine learning on home video: A development and prospective validation study. *PLoS Medicine*
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Exploratory study examining the at-home feasibility of a wearable tool for social-affective learning in children with autism. *NPJ Digital Medicine*
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Human Perception of Swarm Robot Motion
- **ScaleMed: A methodology for iterative mHealth clinical trials** *17th International Conference on E-health Networking, Application & Services (HealthCom)*
  Washington, P., Kumar, M., Tibrewal, A., Sabharwal, A.

- **Feasibility Testing of a Wearable Behavioral Aid for Social Learning in Children with Autism** *APPLIED CLINICAL INFORMATICS*
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- **Analysis of Sex and Recurrence Ratios in Simplex and Multiplex Autism Spectrum Disorder Implicates Sex-Specific Alleles as Inheritance Mechanism**
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- **Exploratory study examining the at-home feasibility of a wearable tool for social-affective learning in children with autism.** *NPJ digital medicine*
  2018; 1: 32

- **SuperpowerGlass: A Wearable Aid for the At-Home Therapy of Children with Autism** *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*
  Washington, P., Voss, C., Kline, A., Haber, N., Daniels, J., Fazel, A., De, T., Feinstein, C., Winograd, T., Wall, D.
  2017

- **Bioty: A cloud-based development toolkit for programming experiments and interactive applications with living cells**
  Washington, P., Samuel-Gama, K., Goyal, S., Riedel-Kruse, I.
  bioRxiv.
  2017

- **Rethinking the Imaging Pipeline for Energy#Efficient Privacy#Preserving Continuous Mobile Vision**
  LiKamWa, R., Hou, Y., Washington, P., Zhong, L.
  SID Symposium Digest of Technical Papers.
  2015

- **The wireless data drain of users, apps, & platforms** *ACM SIGMOBILE Mobile Computing and Communications Review*
  2013; 17 (4)