Contact

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LinkedIn
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Skills

Communication
team leadership
shipping products
data privacy, safety, and policy
cross-department collaboration

Data & Statistics
psychometrics
annotation quality
feature engineering
statistical reliability

Generative AI
large-language models
vision-language models
neural networks
embodied avatars
natural language processing
computer vision

UX
hardware prototypes
AI-mediated reality
AR/VR development, Unity
A/B testing
device and display calibration

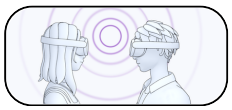
Elizabeth Hall, PhD

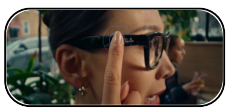
I specialize in the tech transfer of state-of-the-art research algorithms from prototype to product. I leverage large-scale data analysis, feature engineering, and user behavior and attitudes to improve AI model performance while balancing compute and resource constraints for scalable solutions. At every stage, I bring scientific rigor and a focus on user delight, building high-performance systems that raise the bar for operational excellence at a global scale.

Experience

Meta *via Inspyr*
Hardware UX Researcher
May 2025 - Jan 2026

- Led 7 targeted studies quantifying speech enhanced Voice Quality on hardware prototypes; **shared recommendations with leaders and enabled the on-time launch of Conversation Focus at Connect 2025**
- Defined KPI protocols and evaluated e2e latency for real-time chatting on Meta AI glasses over Bluetooth
- **Spearheaded cross-departmental collaboration** to create a VR and AR UX research platform for Codec Avatars
- **Mentored a team of 4 assistants and interns** to evaluate advanced spatial audio and speech rendering on distributed AR/VR systems with limited compute
- **Designed evaluative experiments for all stages of prototype-to-production development**; experience working with tactile transducers, digital sensors, and the Martini sync protocol


Spatial Audio for AR and VR


Conversation Focus with Meta Ray Ban Glasses

Amazon
Data Science Intern
May 2023 - Sept 2023

- **Developed a LSTM in Python** to predict 10 million customers user behavior patterns with Alexa-brand video/audio devices
- **Communicated key results to C-suite level stakeholders**
- **Reweighted machine learning features** to align forecasts with A/B tests achieving 93% accuracy
- **Built feature engineering pipeline to process millions of customers' data** through Amazon data-storage system improving data processing for a telemetry dashboard

Programming

Languages
Python
PyTorch / Tensorflow
R
SQL
MATLAB
C++
Javascript
HTML / CSS
Bash

Machine Learning/Data Science
pandas
OpenCV
NumPy
SciPy
fasttext
regressions, ANOVA, t-tests

Data Engineering
Linux
Docker
AWS
S3
ETL
Spark
parallel processing

Education

PhD Psychology
UC Davis 2025

MSc Neuroscience
EHU 2016

BA Liberal Arts
Bennington College 2015

Certifications
via Neuromatch Academy:
Comp. Neuroscience (2020)
Deep Learning (2021)
NeuroAI (2024)

DARPA
May 2019 - Sept 2022
Statistical Consultant

- **Statistical consulting** for the University of Melbourne, DARPA Project SCORE, and the Replicats project
- Supported the development and deployment of automated tools that enable DoW personnel to quickly calibrate the validity of behavioral science claims/results

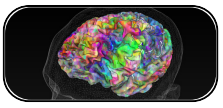

Automated tools to rate research responsibly

UC Davis
Sept 2018 - Dec 2024
Research Fellow

- **Led a 4-year research program** on multisensory attention in VR, with $230K in funding from the *Office of Naval Research*
- Trained 10 assistants on eyetracking and display calibration
- Developed a psychophysical framework for assessing 3D depth perception and image distortion
- Designed a **computer vision object detection** and eye-tracking systems analysis across multiple VR and AR branded devices
- Created and evaluated **vision-language transformer** models of 30k semantic segmentations **with Pytorch/Tensorflow** to generate textual descriptions of complex, cluttered images
- **Published 7 scientific papers in high-impact journals** and presented at *ICCV*, *Psychonomics*, and the *Vision Science Society*

NIMH
Aug 2016 - Aug 2018
Research Fellow

- Designed online experiments to collect and evaluate human data and semantic segmentations using JavaScript and Amazon Mechanical Turk, collecting data from over 2,000 participants
- Recorded 7T BOLD fMRI signal and applied multivariate pattern analyses and neural network based-decoding to identify stimulus perception within the visual cortex and hippocampus
- Published neural computing and neuroimaging research in *Nature Communications and Cerebral Cortex*


Meaning in the Brain Changes Ideas on Memory


Our Memory Is Even Better Than We Thought