

# Anant Mittal

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Designing, Building, and Evaluating Human-AI Systems with Mixed Methods

## EDUCATION

### PHD, COMPUTER SCIENCE

UNIVERSITY OF WASHINGTON,  
ALLEN SCHOOL OF COMPUTER  
SCIENCE & ENGINEERING  
Expected Spring 2025 | Seattle, WA  
Thesis: Designing Feature-Rich  
Communication and Collaborative  
Systems in Accessibility and Health

### MS, INFORMATION SCIENCE

UNIVERSITY OF MICHIGAN  
May 2019 | Ann Arbor, MI  
Specialization in Data Science and ML

### BACHELOR OF TECHNOLOGY, COMPUTER SCIENCE

INDRAPRASTHA UNIVERSITY  
August 2013 | Delhi, India

## SKILLS

### ENGINEERING

Full-Stack Engineering,  
Machine Learning,  
Natural Language Processing,  
Cloud Computing Services,  
Web and Mobile Development,  
Relational and Non-Relational Databases

### RESEARCH AND DESIGN


Prototyping, Experiment Design,  
Semi-Structured Interviews,  
Focus Groups, Wizard of Oz,  
Qualitative Study Design,  
Qualitative and Quantitative Data  
Analysis, Data Visualization

### TEACHING

Introduction to Human-Computer  
Interaction, Advanced Topics in  
Human-Computer Interaction, Software  
Development for Data Scientists, Games  
Capstone

## LINKS

 [anantmittal.github.io](https://github.com/anantmittal)

 [anantmittal](https://www.linkedin.com/in/anantmittal)

 [anantmittal](https://twitter.com/anantmittal)

 ORCID

## EXPERIENCE

### UNIVERSITY OF WASHINGTON | GRADUATE RESEARCH ASSISTANT

June 2019 – present | Seattle, WA

- **SCOPE: Technology Enhanced Collaborative Care for Cancer & Depression**
  - Built SCOPE, an open-source web-based patient-provider system for providers and people with cancer to manage their treatment and depression.
  - Deployed the platform for a clinical trial in 6 cancer clinics in Washington (100+ cancer patients enrolled to date) and conducted 45 interviews (24 with patients and 21 with behavioral health providers) to understand usability and implementation challenges.
  - Wrote position paper for workshop on bridging HCI and implementation science, reflecting on scaling the SCOPE research system for real-world impact. [PDF]
  - Analyzed interview data and wrote a manuscript currently in review to the ACM Conference on Computer-Supported Cooperative Work and Social Computing.
  - Currently building generative AI enhanced features to support patient-provider collaboration in mental health interventions such as behavioral activation.
- **Enhancing Executive Functions through Math Learning Games**
  - Designed and prototyped math learning games (e.g., prototype 1, prototype 2) to enhance executive functions like working memory, cognitive flexibility, and inhibition control.
  - Ran mechanical turk experiments with 200+ turkers to evaluate if the games improved executive functions.
- **Scientific Discovery through Games**
  - Built a machine learning pipeline for Mozak, a scientific discovery game where players collaboratively reconstruct complex 3D representations of neurons by tracing their volumetric image.
  - Computed incorrect neuron traces made by non-expert players using game data and generated tutorials using centroid and density based clustering methods.

### MICROSOFT RESEARCH | RESEARCH INTERN

June 2022 – September 2022 | Bengaluru, India

- **Jod: Examining Design and Implementation of a Videoconferencing Platform for Mixed Hearing Groups**
  - Designed and built Jod, an open-source videoconferencing platform to reduce accessibility barriers for mixed-hearing groups, with features such as customizable video tiles, preset feedback messages, and AI-based gesture recognition.
  - Conducted user studies with 34 participants, including 18 d/Deaf or hard of hearing participants, 10 hearing participants, and 6 sign language interpreters.
  - Analyzed system usage logs and focus group transcripts and published our findings to the ACM Conference on Computers and Accessibility. [DOI]

### SCIENTIFIC SOFTWARE ENGINEERING CENTER, ESCIENCE

#### INSTITUTE | GRADUATE RESEARCH ASSISTANT

September 2023 – June 2024 | Seattle, WA

- **SciPy Tutorial:** Wrote content and delivered a tutorial on generative AI and retrieval-augmented generation for SciPy conference 2024 to 50+ attendees.