# Saad Hassan

*Research Intern at Google | PhD candidate in Computing and Information Sciences Student*

I am a rising third-year Ph.D. student in Computing and Information Sciences at Rochester Institute of Technology. My primary research interests lie at the intersection of AI, HCI, accessibility, and Linguistics. I am part of the Center for Accessibility and Inclusion Research (CAIR) lab, where I work under the advisement of Matt Huenerfauth.

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## RESEARCH AREAS

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|---|---|---|---|
| **Experimental Studies** | **Rapid Prototyping** | **NLP/NLU** | **Accessibility** |
| **User-centered Design** | **Machine Learning** | **HCI** | |

## TECHNICAL SKILLS

- **Programming Languages**: Python (5 years), JavaScript (3 years), C++ (3 years), Java (2 years), GoLang (1 year)
- **Other tools/Libraries**: R (3 years), MATLAB (4 years), TensorFlow (1 year), PyTorch (1 year), Scipy (2 years)
- **Front-end development and Prototyping**: Kotlin, CSS/HTML, Figma, Unity, Photoshop, Balsamiq, Adobe Suite

## EDUCATION

### PhD Computing and Information Sciences

🏛 Rochester Institute of Technology    📅 2019 – 2024

- Advisor: Matt Huenerfauth
- GPA: 4.0, Expected Graduation: May 2024
- Relevant courses: Statistical Machine Learning, Natural Language Processing, Computational Linguistics, Research Methods in HCI, Quantitative Methods, Qualitative Research Methods, Foundations of Software Engineering

### B.S. Computer Science

🏛 Lahore University of Management Sciences    📅 2015 - 2019

- Graduated with high merit
- Teaching Assistantship: Software Engineering
- Relevant courses: Artificial Intelligence, Human Behavior, Statistics, Advanced Programming, Topics in Interactive Computing, HCI, Data Science, Social Psychology

## RESEARCH EXPERIENCE

### Research Intern

🏢 Google LLC    📅 May 2021 – Present    📍 Mountain View, CA (Remote)

### Graduate Research Assistant

🏢 Center for Accessibility and Inclusion Research at RIT    📅 Aug 2019 – Present    📍 Rochester, NY

1. **Caption Evaluation Metric for Live Television (Dept. of Health and Human Services Project)** Publication
   - Collected and analyzed datasets of Deaf and Hard of Hearing (DHH) users' judgements regarding placement and presentation of caption across different genres of live-television
   - Developed a metric for evaluation of live-television captions that is well correlated with DHH users' judgements
2. **American Sign Language Dictionary Search using Web-cam (NSF Funded Project)** Publication
   - Investigating user behavior in search interfaces that take video-based input by conducting lab-based studies
   - Identifying and examining the effect of various factors on users' perception of natural-language search systems
   - Collaborating with machine-learning scientists and ASL linguists to provide data-driven design recommendations
3. **Social Biases against People with Disabilities**
   - Conducted analyses on the output of a large scale BERT language model for word prediction task
   - Used sentiment analysis and topic modeling to evaluate the output of BERT

### Undergraduate Researcher

🏢 Computer Human Interaction and Social Experience Lab    📅 May 2018 – Jun 2019    📍 Lahore, Pakistan

1. **Assisting Diagnosis and Rehabilitation of Adolescents with Major Depressive Disorder**
   - Co-designed a tool with psychiatrists using semi-structured interviews and a diary study that allowed better verbalization of symptoms of major depressive disorder (MDD) in adolescents by the use of a game-based solution
2. **Designing Game-Based Learning Solutions for Urdu as a Second Language** Publication
   - Empirically investigated the suitability of the use of a designed gamification framework to assist second-language learning within the context of interactive storytelling in an experimental study

## AWARDS AND HONORS

| **CAIR Communication Chair** | *PhD Merit Scholarship* | *Student Excellence Award* |
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| *Selected by director to serve as chair for lab-wide communications* | *Full-tuition and stipend support, Rochester Institute of Technology* | *Language Science and Computational Linguistics, 2021* |