Ricardo E. Gonzalez Penuela

Curriculum Vitae/Resume

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https://rgonzalezp.github.io/

Education

2021.1–Present **Doctor of Philosophy (Ph.D.) in Information Science**, *Information Science Department, Cornell Tech, Cornell University, New York, United States*

2015.1–2019.12 **B. Eng. in Systems and Computer Engineering**, *Department of Systems and Computer Engineering, Universidad de Los Andes, Bogota, Colombia*

Research Work and Publications

2022.10 ***Hands-On: Using Gestures to Control Descriptions of a Virtual Environment for People with Visual Impairments****: Paper in submission* ***UIST2022***

Ricardo E. Gonzalez Penuela*, Wren Poremba, Christina Trice, & Shiri Azenkot. While researchers have explored how to make navigation and object perception more accessible in VR, none have offered a natural way to request descriptions of objects, nor control the flow of auditory information. We present a haptic glove that PVI can use to request object descriptions with their hands through hand gestures.*

2022.10 ***Uncovering Visually Impaired Gamers' Preference for Spatial Awareness Tools Within Video Games****: Accepted paper to appear in* ***ASSETS '22*** *(26.5% acceptance)*

Authors: Vishnu Nair, Shao-en Ma, ***Ricardo E. Gonzalez Penuela****, Yicheng He, Karen Lin, Mason Hayes, Hannah Huddleston, Matthew Donnelly, Brian A. Smith. We investigated four leading approaches to facilitate spatial awareness for visually impaired gamers within a 3D video game. We uncover what is the most important information for visually impaired gamers to gain spatial awareness, and how well our spatial awareness tools provide it.*

2022.10 ***Understanding How People with Visual Impairments Take Selfies: Experiences and Challenges****: Accepted poster to appear in* ***ASSETS '22*** *(59% acceptance)*

Ricardo E. Gonzalez Penuela*, Paul Vermette, Zihan Yan, Cheng Zhang, Keith Vertanen, & Shiri Azenkot. Selfies are a pervasive form of communication in social media. PVI want to participate in social media just like their sighted counterparts, so it is important to ensure that selfie-taking is accessible. We contribute design guidelines that researchers and designers can implement for creating accessible selfie-taking applications.*

2021.10 ***Towards a Generalized Acoustic Minimap for Visually Impaired Gamers****: Demo in* ***UIST2021*** *(Overall acceptance 21%)*

Authors: Vishnu Nair, Shao-en Ma,Hannah Huddleston, Karen Lin, Mason Hayes, Matthew Donnelly, ***Ricardo E. Gonzalez Penuela****, Yicheng He, Brian A. Smith. We developed a prototype with four acoustic minimap techniques which would enable visually impaired gamers gain spatial awareness of a game environment.*

2020.4 ***Molder: An Accessible Design Tool for Tactile Maps****: Paper in* ***CHI2020*** *(24.3% acceptance)*

*Authors: Lei Shi, Yuhang Zhao, **Ricardo E. Gonzalez Penuela**, Elizabeth Kupferstein, Shiri Azenkot. Molder is an accessible design tool for interactive tactile maps, an important type of printed materials that can help visually impaired students learn O&M skills.*

2019.10 ***Tactiled: Towards more and better tactile graphics using machine learning**: Poster in **ASSETS '19** (58% acceptance)*

***Gonzalez, R.**, Gonzalez, C., & Guerra-Gomez, J. A. (2019). Tactiled. The 21st International ACM SIGACCESS Conference on Computers and Accessibility - ASSETS 2019. Presented at the The 21st International ACM SIGACCESS Conference.*

2019.8 *Markit*

*Lei Shi, & **Ricardo E. Gonzalez Penuela**. (2019, November 2). rgonzalezp/Markit: Markit V1.0 (Version V1.0). Zenodo. http://doi.org/10.5281/zenodo.3526177*

Research Community Involvement

Community

2021.1–Present *XR Access Research Network. Working closely together with Professor Shiri Azenkot, Co-Founder of XR Access, to run all activities related to the XR Access Research Network. This includes:*

Organizing, recruiting speakers, and hosting the **XR Access Research Network Seminar**. We have brought over 7 community leaders in the space of XR Accessibility to share their work.

Mentoring in the **REU site** (Research Experience for Undergrads) program **hosted by the XR Access Research Network** and **funded by the NSF**, Summers of 2021, and 2022. At both opportunities, fully-funded undergrad students collaborated in projects that have become submissions/fully-published papers at significant conferences (ASSETS,CHI, UIST) or that are currently in submission.

Recruiting speakers, and hosting the **Research to Practice Panel** at the **XR Access Symposium 2022**.

Peer Reviewing

Reviewer at Mobile HCI 2022.

Awards and Media

Fellowships & Grants

Fall 2022–Fall 2023 *Recipient of the Digital Life Initiative (DLI) **Doctoral Fellowship**. "The Program engages students in systematic inquiry into ethical and political implications of the digital age. Such inquiry centers on issues – e.g. fairness, security, privacy, and accountability – that concern existing and emergent digital technologies."*

Media

2019.6 *Note on **Assistive Technologies** work in Colombian newspaper **El Espectador**: "Colombian engineers develop tools to help blind people"*

Teaching Job Experience

Spring 2021 *Teacher assistant for class INFO 5305: **User Experience and User Research methods**, **Cornell Tech**, with Professor Shiri Azenkot*

Research Job Experience

2019.5–2019.8 ***Research Assistant Intern*** *at* ***Cornell Tech*** *at the Enhancing Ability Lab (****Accessibility****) with Professor Shiri Azenkot, "Summer Undergraduate* ***Research Fellowship****"*

2019.8–2020.12 ***Research Assistant*** *at* ***Cornell Tech*** *at the Enhancing Ability Lab (****Accessibility****) with Professor Shiri Azenkot*

Presented ***Molder*** *demo at* ***ASSETS '19*** *on behalf of Professor Shiri and Lei Shi, see more in the Research Work section*