

Ricardo Gonzalez

Reg258@cornell.edu | New York, NY | github.com/rgonzalezp | rgonzalezp.github.io | cell: 646.889.4931

EDUCATION

Cornell University, Cornell Tech, New York, NY

Expected Dec 2025

Doctor of Philosophy in Information Science – Human Computer Interaction

Awards - Full scholarship recipient, Digital Life Initiative (DLI) fellowship recipient

Universidad de Los Andes, College of Engineering, Bogota, Colombia

Jan 2020

Bachelor of Computer and Systems Engineering

SPECIALIZED SKILLS

Back-end Development Tools: C# (Unity), Python, Java, JavaScript, TypeScript

Front-end Development Tools: React, React Native, Animejs, Greensock, NodeJS, Django, Jekyll

Developer Tools: Github, Gitlab, Vscode, Visual Studio, Unity, JetBrains Suite, Postman, Jenkins, Jira, AWS

Domain Knowledge: Web accessibility, iOS Accessibility, OculusVR, XRI, 3D Printing, Laser Cutting

Language: Spanish (Native); English (fluent); Chinese (basic)

ACCESSIBILITY RESEARCH EXPERIENCE AND SOFTWARE DEVELOPMENT

Summer Associate – Research Intern at GT Applied Research, JPMorgan Chase & Co, New York, NY **Jun-Aug 2023**

- Collaborated with [Blair MacIntyre](#), Global Head of Immersive Technology and Spatial Computing Research at JPMC, [Fannie Liu](#), and [David Saffo](#), immersive technology researchers working under Blair's leadership.
- **Led** and submitted a **patent proposal** for an **immersive data analysis technology**, usable by Blind and Low Vision users.
- Developed MVP of patent and **tested** with **Screen reader users** and **accessibility experts**.

Visiting Researcher, Columbia University, New York, NY

May-Dec 2021

- Collaborated with Professor Brian Smith and PhD candidate Vishnu Nair in a Game Accessibility research project; The **research paper¹** written was **published in a top 1% conference in the HCI field**.
- Designed and coded 1 of 5 Accessible tools in a 3D adventure game, echolocation, to understand how visually impaired gamers acquire spatial information. — C#, Unity
- Carried out and analyzed 15 interviews to evaluate the effectiveness of our 5 Accessible tools for 3D adventure games.

Full stack Engineer, Leal, Bogota, Colombia

Jan-Jun 2020

- *Leal is a software development startup that assists businesses to establish their cashback and loyalty rewards programs.*
- Revamped **frontend design of core dashboard of the CRM** used by **500 different brands** (clients) to track the effectiveness of their loyalty programs with **over 4 million users**. — AngularJS, CSS
- Implemented multiple **API services utilized by both web-client and iOS application** to develop new features such as tracking transaction history and point accumulation confirmation. — Typescript
- **Designed data model, and API architecture** to manage new **cashback program** in partnership with UseButton to provide savings to customers of our partner brands. — Javascript

Research Intern – Summer Research Fellowship, Cornell Tech, New York, NY

May-Sep 2019

- Developed a pipeline for teachers of students with disabilities to **design and use interactive 3D printed models** to teach visually impaired students. — Python, React, NodeJS, Swift
- Redesigned and improved a 3D modelling tool in Blender, Markit, through Python scripting. The tool is used to **annotate 3D printed models** to interact with them with **Augmented Reality**. **Optimized models file size to 10% their original size**
- Designed, developed, and deployed a website (Both front-end and back-end) **to host the 3D models distribution through Amazon Web Services** to support the research study.
- Modified Talkit, the iOS application, to be compatible with the pipeline; Making it possible to download interactive models hosted on the website inside Talkit.

RESEARCH PUBLICATIONS

Anonymized to respect peer-review process. **CHI2024 (In Submission)**

Sep 2023

- Developed iOS application for a study that collected data from Blind and Low Vision participants to understand how they use technologies like SeeingAI. — Swift

Hands-On: Using Gestures to Control Descriptions of a Virtual Environment for People with Visual Impairments: Demo in UIST2022 (Overall acceptance 25.9%)	Oct 2022
<ul style="list-style-type: none"> We created a haptic glove and a set of interactions that blind people can use to get descriptions of the environment with their hands in Virtual Reality with OculusVR. — <i>C#, Unity, Wiring</i> 	
Uncovering Visually Impaired Gamers' Preference for Spatial Awareness Tools Within Video Games: Paper in ASSETS '22 (Acceptance 26.5%)	Oct 2022
<ul style="list-style-type: none"> We discovered that position and orientation is the most important aspect to visually impaired gamers awareness of their surroundings and it is not well-served by current game mechanics' design. — <i>C#, Unity</i> 	
Understanding How People with Visual Impairments Take Selfies: Experiences and Challenges: Poster in ASSETS '22 (Acceptance 59%)	Oct 2022
<ul style="list-style-type: none"> Carried out 10 interviews and observed behavior of visually impaired people that frequently take selfies to derive design guidelines for Accessible front-facing camera interactions. 	
Towards a Generalized Acoustic Minimaps for Visually Impaired Gamers: Demo in UIST 2021 (Overall acceptance 21%)	Oct 2021
<ul style="list-style-type: none"> We developed a prototype with four acoustic minimap techniques to enable visually impaired gamers to gain spatial awareness of a game environment. — <i>C#, Unity</i> 	
Molder: An Accessible Design Tool for Tactile Maps: Paper in CHI 2020 (Acceptance 24.3%)	Apr 2020
<ul style="list-style-type: none"> We designed a tool that can be used by visually impaired teachers to create 3D printed interactive models with Mobile AR. — <i>Python, Blender, Swift</i> 	
Tactiled: Towards more and better tactile graphics using machine learning: Poster in ASSETS '19 (Acceptance 58%)	Oct 2019

PATENTS

Undisclosed – Currently in Submission , New York, NY	Aug 2023
<ul style="list-style-type: none"> Data Analysis tool for Blind and Low Vision people. Developed during internship at JPMorgan Chase & Co. 	

ADDITIONAL PROJECT EXPERIENCE

Hands-On: VR for people with Visual Impairments , New York, NY	May- Oct 2022
<ul style="list-style-type: none"> Proposed research project and led and mentored 2 research interns; The research paper¹ written in the program was published in a top 1% conference in the HCI field. 	

SELECTED LEADERSHIP EXPERIENCE

Teacher Assistant – Virtual and Augmented Reality , New York, NY	Sep 2022-May 2023
<ul style="list-style-type: none"> Composed course topic about VR/AR Accessibility which was integrated into the official curriculum. Hosted weekly office hours to support with XR development projects and graded assignments. 	

XR Access Research Network – Program Manager , New York, NY	Jan 2021-Aug 2022
<ul style="list-style-type: none"> Work closely with Co-Founder, Dr. Shiri Azenkot, to organize and host 7 monthly seminars, and moderated a panel at the XR Access Symposium 2022 Recruited 7 community leaders in XR Accessibility to share their research insights to an audience of 400 Accessibility practitioners. 	

XR Access Summer Internship Program – Research Mentor , New York, NY	May-Sep 2021, May-Sep 2022
<ul style="list-style-type: none"> Led two research projects on Accessibility for People with Visual Impairments and mentored 7 undergraduate students on the projects; Research papers^{1,2} written were published in a top 10% conference in the HCI field. Created a series of workshops for program participants to learn about academic research procedures, tools, and methods. 	

ACTIVITIES and INTERESTS

Chair of Web design team of the ACM Special Interest Group on Accessible computing 2023 Conference in NYC. Responsible of the design, web development and deployment of the conference website.
Volleyball; Old School Runescape; Running