

# Elijah Zulu

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## EDUCATION

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### Columbia University

*C.P Davis Scholar | B.S in Computer Science*

New York, NY

Sep 2019 – May 2023

## WORK EXPERIENCE

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### Undergraduate Researcher

*Columbia University - Internet Real-Time Lab*

May 2021 – August 2021

New York, NY

- Helped develop new abstraction and discovery mechanisms to make programming large-scale IoT systems feasible
- Developed a system/workflow for creating Virtual Reality(VR) digital twin systems without experience developing in VR

### Undergraduate Researcher

*Columbia University - Graphics and User Interfaces Lab*

June 2020 – May 2021

New York, NY

- Working under the Graphics lab to implement GNSS/SLAM approach to navigation using Augmented Reality
- Acted as one of the leads in developing an object recognition pipeline for Columbia Space Initiative's NASA SUITS challenge

### Front-End Web Developer

*Columbia University School of International and Public Affairs*

December 2020 – April 2021

New York, NY

- Refactored and added additional functionality to an in-house tool that facilitates the design of classes on Courseworks/Canvas.
- Conducted User Interface studies involving professors and course assistants

### Technical Coordinator, Editor

*Columbia University Picker Center Digital Education Group*

Sep. 2019 – Present

New York, NY

- Worked in the post production of a Climate Change documentary for the UNDP (United Nations Development Programme )
- Developed content for a MOOC (Massive Open Online Course) about using video case studies for education in Columbia's EMPA Program

## PROJECTS

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### IoT Digital Twins | C#, Unity3D, MQTT, Javascript

May 2021 – August 2021

- Worked with IoT researchers to understand what workflow is best from their perspective as users
- Wrote custom software to connect an MQTT Server to 3D Objects in Unity3D

### National Museum A.R Tour | C#, Unity3D, Vuforia SDK, EasyAR SDK

June 2018 – Present

- Developed an interactive Augmented Reality tour app for the Lusaka National Museum
- Worked with the Smithsonian Digitization Program to provide access to 3D models through the app

### Spark AR | SparkAR, Javascript, Texture Mapping, 3D Modelling and Animation

October 2019 – Present

- Facebook SparkAR developer for the Instagram platform
- Garnered over 200K organic impressions
- Collaborated with other artist and creators to bring a new level of engagement between them and their audience using Augmented Reality

## TECHNICAL SKILLS

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**Languages:** C#, C/C++, Java, Python, JavaScript(VUE and React Native), HTML/CSS,

**Developer Tools:** Google Cloud Platform, Git, VS Code, Visual Studio, Bash

**Design Skills:** Adobe Creative Cloud, 3D Animation, 3D Modelling and Texturing, Motion Graphics

**Libraries:** OpenCV, OpenGL, NumPy, Matplotlib, pandas