

CHRISTIAN FERNANDO GUTIÉRREZ



Virtual & Augmented Reality Software Engineer and UX Researcher

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TECHNICAL EXPERIENCE

Qualcomm Corporation – XR Software Engineer

📅 August 2019 – February 2020 📍 San Diego, CA

- Co-developed a 3D simulation of a motion capture system in Unity, rendering a virtual HMD inside configurable synthetic environments
- Simulation outputs HMD pose estimation, IMU data and camera images, to validate proprietary 6DoF inside-out tracking algorithm

Center for Cyber-Archaeology and Sustainability

Virtual Reality UI/UX Researcher

📅 April 2017 - March 2018 📍 San Diego, CA

- Led the design, prototyping and implementation of the user interface for an interactive public exhibit, comprising a 6-monitor CAVE display
- Project is used to visually showcase large collection of archaeological data, such as 360 images, 3D models and point cloud environments

Intel Corporation – VR Software Engineer

📅 June 2017 – September 2017 📍 Santa Clara, CA

- Designed and prototyped a VR exercise app that animates the body pose of the user's avatar dynamically, based on external camera data
- Provide real-time visual feedback of user accuracy based on their attempts to match their body poses with those of the virtual coach

Nanome Inc – VR Software Engineer Co-Op

📅 April 2016 – June 2017 📍 San Diego, CA

- Built image and video recording feature to enable scientists to collaboratively visualize, design and simulate new drugs in VR
- Refactored code base to transfer 3D vector math application from Oculus Rift desktop into a mobile version for Samsung Gear VR

NASA Jet Propulsion Laboratory – AR Software Engineer

📅 June 2016 – August 2016 📍 Pasadena, CA

- Implemented interaction techniques to manipulate spacecraft 3D models, for an AR multi-user holographic communication application
- Implemented various key features- including design tools such as rotation widgets, position reset, tool tips, and preset option buttons

NON-TECHNICAL EXPERIENCE

Volunteer Teacher in Africa – Math, English, Geography

📅 June 2018 – December 2018 📍 Various African Countries

- Traveled through 6 southern African countries volunteering at public elementary schools teaching children from low-income townships

Laz Hospitality and Valet – Supervisor

📅 March 2011 – October 2015 📍 San Diego, CA

- Client-facing services & location management at hotels + restaurants

MEDLIFE Nonprofit Org – Healthcare Volunteer in Peru

SKILLS



EDUCATION

University of California, San Diego

B.S. Cognitive Science + Machine Learning and Neural Computation

B.S. Minor: Computer Science

Grossmont College

A.S. Mathematics (Honors)

Imperial Valley College

A.A. Social Science

PROJECTS

Cyber-Archaeology VR Hackathon

1st Place Winning Team

- Developed an interactive educational journey that guided users in excavating and processing a copper artifact

SHPE Reach Hackathon

1st Place Winning Team

- Constructed a working prototype of a smart leg brace to be used by sufferers of muscular dystrophy in physical therapy

LA Hacks (2016)

Top 5 finalist teams

- Designed an interactive educational VR experience for learning vector calculus

LEADERSHIP

Society of Hispanic Professional Engineers at UCSD (SHPE)

–Chapter Secretary

Virtual Reality Club at UCSD

–Finance Officer (Treasurer)

Theta Tau Professional Fraternity

–Corresponding Secretary

Code2040 Fellow 2017

Intel Scholar 2017