

Roberto Leon-Luna

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WORK EXPERIENCE

Viacom – Broadcast Systems Development

June 2018-August 2018

Software Engineer Intern

New York, NY

- Developed a 4K video encoder written in C++ that converted YUV video files into 4K video files using the x265 software library
- Tested encoder on Trident play-out system to benchmark FPS that servers achieve using various encoder presets
- Presented test results to broadcast systems team and recommended that Viacom is not in a position to implement a 4K video encoder into their play-out system

University of Michigan – Haptix Lab

January 2016-September 2016

Research Assistant for Ph.D. candidate Alex Russomanno

Ann Arbor, MI

- Fabricated silicon refreshable braille displays using clean room technologies for use in testing
- Developed Arduino tool that analyzed the brightness of video clips to measure the response time of micro fluidic logic gates to air pressure fluctuations
- Optimized the response time of micro fluidic logic channels through testing with transducer and air gun

SKILLS

Languages:

C++, Python, JavaScript

Frameworks:

React, Vue.js, Flask, Apple AR Kit

Databases:

MongoDB, SQL, Firebase

ADDITIONAL EXPERIENCE

Mobile App Development

January 2020-April 2020

Augmented Reality iOS App for Art

- Designed, built, and tested an iOS mobile application using Swift, Apple AR Kit, and Firebase that allowed users to display multiple art pieces through an augmented reality view
- Performed customer research and design iteration in order to determine the UI layout and the back-end design
- Prepared and presented several presentations throughout the semester on the progress of the mobile application, design decisions for the mobile application, and customer research

Web Development

September 2019-December 2019

Instagram Web App

- Developed a clone of the Instagram web app using Flask, SQL, and React
- Used Flask and SQL to build the back-end technology such as the database, URL routes, and REST API
- Used React, HTML, and CSS to build client-side features that updated the front-end based on user input

End-to-End Search Engine

- Used a Hadoop map reduce pipeline to process information in parallel and create an inverted index
- Created a search interface using React that took search query from user and presented relevant search results based on inverted index and page rank

EDUCATION

University of Michigan College of Engineering

Class of 2020

BSE in Computer Science

Ann Arbor, MI

Universidad de Navarra @ TECNUN

May 2016-July 2016

Micro-robotics & Spanish industries study abroad program

San Sebastián, Spain/Pamplona, Spain

LINKS

GitHub: <https://github.com/bertleon>

LinkedIn: <https://www.linkedin.com/in/roberto-leon-luna-707953104/>