Andrés Rincón

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EXPERIENCE

Visiting Scholar at Purdue University - Indiana, USA
Feb. 2023 – May. 2023

Controlling electronic hardware using mixed reality devices

- Developed and designed a mixed reality interface in **C#** that established a communication between the **HoloLens** glasses and a pneumatic arm using the **Unity** game engine.
- Integrated the connection of electronic hardware using an **Arduino** micro-controller and **TCP** proctocols.
- Worked together with peers from different backgrounds to publish the results in the ASME 2023 conference.

Teaching Assistant
Aug.2022 – Dec.2022

Undergraduate Teaching Assistant at Universidad de los Andes

- Mentored students on early stages of their undergraduate degree in Introduction to Systems and Computing Engineering.
- Assisted students in their first approaches to programming using different tools such as **Unity**, **Kodular**, and **Arduino**.

EDUCATION

Universidad de los Andes
Bogotá, Colombia

Systems and Computing Engineering (GPA: 4.19)
Jan. 2019 – May 2023

PROJECTS

Thesis Virtual Reality Project (Final Grade: 5.00)
Aug. 2022 – Dec. 2022

Cooperative puzzle game in VR

- Developed a virtual reality game in **Unity - C#** to reinforce communication skills.
- Utilized **Photon PUN** to set up the multiplayer functionalities of the game.
- Engaged with performance optimization and iterative development with test and debugging, on multiple phases.

Airline analysis
Aug. 2022 – Oct. 2022

Data Engineering

- Developed 3 **DataStudio and Power BI** data dashboards to explain to the company the analysis and subtracted information from an ERP database.
- Designed and implemented an **ETL** and saved the processed data in a database, modeled the data into classes, and processed them using **Jupyter Notebook** to identify different agents and important factors in the airline processes.

LINK
Feb. 2022 – May 2022

Flutter Mobile Application

- Developed a Mobile Application using the **Dart** programming language.
- Engaged with data management, data serialization, design patterns and performance optimization.

Harmony
Aug. 2021 – Nov. 2021

Learning tool in Virtual Reality

- Developed a game in **Unity - C#** to teach people how to play the drums and enable them to interact with other users using a virtual environment set up in a **Photon Server**.

Death Cause Analysis
Sep. 2021 – Dec. 2021

Visualization in data dashboards

- Developed a **Power BI** data dashboard to analyze and understand a data set from a public source about the cause of death in Colombia's population by year.
- Performed an **ETL** process using the **Jupyter Notebook and Scikit-learn** to identify the correlation of different variables and the people's cause of death.
- Performed **data profiling** to manipulate the initial data set in order to meet the business requirements and built a data mart for further analysis.
- Utilized a machine learning clustering algorithm in **Python** to identify groups of people who shared a similar behavior. Verified the correlation between the cause of death and the variables with logistic regression.

FreestAIle May 2021 – July 2021

Machine Learning Project

- Developed a **Python** program that used Natural Language Processing(**NLP**) to imitate the thought process of a person doing freestyle rap.
- Created and trained a model of Natural Language Processing with songs using **Python** and the **Tensorflow** library.

Software Architecture for Gnosoft Jan. 2021 – May 2021

Developing a solution for a real-life scenario

- Worked with an IT services company that has an impact in different regions of Colombia, providing platforms for schools with outdated infrastructure, in order to manage their students' data efficiently.
- Back-end development using **Python**.
- Utilized tools such as Amazon Web Services (**AWS**), **Django**, **Docker** and **MongoDB**.
- The project required knowledge in **architectural patterns**, **data management** and **security(OWASP)**, using **Linux** servers and communicating with them through IP and SSH.
- The company took ideas from the project to improve upon their business.

SQL Database Management Aug. 2020 – Dec. 2020

Project in Oracle SQL Developer

- Designed and built a relational database taking into account the ACID properties and using the normalization of data.
- Developed a script to populate a Database taking into account the business requirements.
- Utilized Java Database Connectivity (JDBC) to build complex queries.

DriVR Apr. 2019 – May 2019

Driving game in Virtual Reality

- Developed a game in **Unity - C#** that taught people how to drive in a virtual environment.

Skills

Technical: Python, C#, Java, C++, SQL (Oracle), JavaScript, HTML/CSS, Dart, Unity, MRTK, Git, Postman, Unix/Linux, Microsoft Office 365
Language: English (C1-IELTS)/(Oral English Proficiency Test -Purdue 2023), Spanish (Native Speaker)
Personal: Critical Thinking, Continuous Learning, Teamwork, Interest in innovative technologies.