Raul Gallo Dagir

Electrical Engineer

work experience

Hardware Engineering Intern @ Two Sigma Investments

July 2021 - September 2021

Working on a novel market data network interface card on an FPGA using Xilinx Vitis HLS toolchain and C++.

June 2020 - August 2020

Built a market data replayer on an FPGA to stress test hardware models under extreme network conditions. The project was built using C++ and SystemVerilog.

Software Engineering and Research Intern @ Hashdex

June 2019 - September 2019

Developed Hashdex's Order Management System and its exchange integrations from scratch, using C# (.NET) and analyzed Bitcoin's on-chain data in order to calculate key metrics to evaluate investment opportunities.

Software Engineering Intern (FBU) @ Facebook

June 2018 - August 2018

Using Java and Node.js, developed a blind dating app, Blind8, for Android mobile devices.

Balloons Team Co-Lead @ Stanford Student Space Initiative (SSI)

December 2017 - May 2018

Redesigned breakout PCBs for project ValBal avionics systems and co-led the team for a semester.

Operations Intern @ Pagar.me

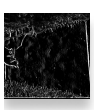
March 2017 - July 2017

Developed internal tools in Python to automate some of the company's internal tasks, such as chargeback conciliation and client verification and onboarding.

projects

"Fusca" - 1973 VW Beetle

Rebuilt parts of VW's 1300 cc air-cooled engine and restored the car as a whole.



Sobel Filter Hardware Accelerator

Used Verilog to improve the performance of the famous Sobel edge-detection operator by building a hardware accelerator on an

Audio Synthesizer

Developed, using Verilog, an audio synthesizer which is able to play notes and chords with harmonics and effects such as echo.

MIPS Processor

Used Verilog to develop a working version of a MIPS processor on a FPGA.

"The Coded Track"

Made an experimental techno track by transforming the graphs of temperature peaks, earthquake intensity, and college admission numbers into audible waveforms using data science libraries in Python and Sox (Sound Exchange).

Spinnin'

Developed a experimental novel instrument to augment my DJ performances and investigate with new forms of generating/ playing music.

awards

Best Android App (Blind8) – Facebook University for Engineers 2018

Blind8 is a blind-dating app in which the app blindly matches you with someone who fits the profile you are looking for. The project was selected as the best Android app of the FBU (Facebook University for Engineers) internship program, which led to a private

Red Bull "Hack the Hits" Hackathon Winner (2018)

Designed and developed a mask that used machine learning to turn beatboxing into MIDI input for Ableton, the BeatMask. Developed in C (Arduino) and used Max/ MSP for the sound processing (spectral analysis) for machine learning.

Unofficial world record for longest latex balloon flight (2018)

The payload stayed aloft for 121 hours (project ValBal, within SSI).

Fundação Estudar Fellow (2017)

Selected as one of the 33 undergraduate and graduate students among 80,000 candidates as Fundação Estudar's Fellows/Líderes.

AB InBev's Hack the World Hackathon Winner (2017)

Created the business model and helped code an app that gamifies the experience of discovering and trying new craft beer and new bars around São Paulo, Brazil.

education

M.S. in Electrical Engineering

Stanford University

June 2020 - present (Leave of Absence)

B.S. in Electrical Engineering

Stanford University

September 2017 - December 2021

relevant coursework

EE 263 (Linear Dynamical Systems), EE 180 (Digital Systems Architecture), CS 110 (Principles of Computer Systems), CS 230 (Deep Learning), CS 148 (Introduction to Computer Graphics), EE 108 (Digital Systems Design), CS 109 (Probability for Computer Scientists), CS 251 (Cryptocurrencies and Blockchain Technologies)