Jason Castillo

he/him

Professional,
Resume

Personal info

- 03/12/1987
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Links

- https://github.com/conejoking
- https://www.linkedin.com/in/jason-castillo-180702139/
- https://conejoking.github.io-/JasonCastilloPortfolio/

Skills

- C++, C, Python, Bash, PHP, Javascript, Verilog, Java, Kotlin, MySQL, Swift, Visual Basic, Ocaml
- LaTeX, HTML, CSS
- {MS, Libre, GSuite} Office, Adobe Acrobat
- Linux, Windows, macOS
- IntelliJ, VS Code, Jupyter Notebook
- DMM, Oscilloscope, Soldering, JMP, MangoDB, Blender, Unreal Engine

Grade scale: (1) very good ≈91%-100%, (2) good ≈81%-90%, (3) satisfactory ≈66%-80%, (4) sufficient ≈50%-65%, (5) failed ≈0%-49%

Work Experience

NXP

Full-time, Process/Equipment Engineer

Mar 2018 – Jun 2023

- Elevated tool availability from 70% to 93% in just 8 months as an Equipment Tool Owner. Implemented a strategic approach emphasizing standardization through comprehensive documentation and training. Conducted root cause analyses using Six Sigma techniques.
- Served as a key advocate for the implementation of Fabguard smart Fault Detection and Classification in the photo and cleans process
- Conducted thorough qualifications for new TEL tool installations. Collaborated efficiently with equipment engineers and vendors, ensuring swift resolution of encountered issues and streamlining the integration process.
- Successfully converted all 365nm i-Line processes from an ACT 8 track to a Pro-Z Lithius. Achieved product test readiness for all recipes within the established schedule
- Process owner of polyimide layer and brought the tool to 100% utilization and prevented line down events.
- Proactively prevented mass excursions by applying last-minute risk assessments and maintaining vigilance around the clock.
- Utilized a DMAIC (Define, Measure, Analyze, Improve, Control) approach to identify solutions for a chronic issue on a newly acquired toolset. The implemented solution reduced maintenance interventions and prevented scrap across the entire fleet

PPD

Part-time, PK Lab Coordinator

Aug 2005 – Mar 2018

- Supervisor of a pharmacokinetics laboratory

Education

Software Engineering, UT at Austin (Graduate Degree)

Austin Aug 2021 – May 2024

Degree: Masters of Science

GPA: 3.2

Coursework: Mobile Computing, Programming Paradigms, Systems Programming, Scalable Machine Learning, Machine Programming NLP, Bitcoin, Distributed Systems, Networks and Communications, Algorithmic Foundations, Parallel Algorithms, Software Testing

Electrical Engineering, Texas State University (Undergrad Degree)

San Marcos May 2014 – Dec 2017

Degrees: Bachelors of Science

GPA: 3.4

Coursework: Engineering Electromagnetics, Digital Systems Analysis Design, Digital Logic, Microelectronic Mechanical Systems, Signals and Systems, Fundamentals of CS

Projects

Defect Classification ML

NXP 2022

With manual classification of defects came an abundance of man hours and delayed test results for crucial fab issues. The solution was to developed a ML model to automatically classify defects from defect images. Utilizing a large data set of already classified defect images we were able to train a model to provide a proof of concept that could help reduce cost and defectivity to the company

Dry Etch RF Match Qualification

NXP 2017

Due to large RF match failures and no more support, there was a need for a more robust option. I qualified a RF match with vacuum capacitors for a for dry etch tool by installing the hardware and running process qualification that yielded 20% increase in efficiency

HDL Microcontroller

Texas State University 2016

Designed a microcontroller on Xilinx using Verlog HDL. We were the only team that was able to implement a pipeline successfully even though this feature requirement was removed due to difficulty

Video Game Development

Personal 2016 – present

First starting video game development on an iPhone using Xcode with the swift langauge to make a side scrolling plane shooter game. Then recently started learning Unreal Engine to develop 3D games. Then along side that I'm also rendering computer graphics using Blender

GPU Image Blur Using CUDA

UT Austin 2023

Created an implementation of Gaussian Blur and then integrated CUDA. The run time was compared from the CPU and GPU implementation over different sized BMP images.

Bitcoin Punch Clock

UT Austin 2022

Developed a solution for instant payment after a shift by having an employee punch in and out and depending on how long their shift was the amount they were paid. System was implemented with a Arduino, Bitcoin test net, and a server.

pH Meter for Industrial Use

Texas State University 2017

Solution to a pH problem for a concrete facility drainage for a senior design project. Developed a outdoor pH meter that could take pH samples every given time and output it's value to a work station. I programmed a Raspberry Pi that could read the signal and had a calibration function based of a linear equation.

Analog and Mixed Signals

Texas State University 2017

Designed analog and mixed signal circuits, like PLL and other filters. Utilized NI Mutism to run simulations and then implement with real hardware components on a breadboard and testing with Oscilloscope with FFT, DMM and signal generators

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Languages

- English (Fluent)
- Spanish (Elementary proficiency)

Certificates and Prizes

2005	Scholarship in Chemistry
2016	Dean's List
2021	Winter Storm Fab Recovery Contributor

Hobbies

- Piano, Jogging, Biking, Cooking, Reading, Ukulele