

# JASON CASTILLO

he/him

Professional Engineer  
Available to Work Immediately  
US Citizen



## Personal info

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## Links

- <https://github.com/conejoking>
- <https://www.linkedin.com/in/jason-castillo-180702139/>
- [www.jzcworks.com](http://www.jzcworks.com)

## Skills

- C++, C, Python, Bash, PHP, Javascript, Verilog, Java, Kotlin, MySQL, Swift, Visual Basic, Ocaml
- L<sup>A</sup>T<sub>E</sub>X, HTML, CSS
- {MS, Libre, GSuite} Office, Adobe Acrobat
- Linux, Windows, macOS
- IntelliJ, VS Code, Jupyter Notebook
- DMM, Oscilloscope, Soldering, JMP, MangoDB, CUDA, Multi-thread Programming, Blender, Unreal Engine, MiniTab, Spectrum Analyzer, Signal Generator, Anemometer, ACT 8 & Pro Z TEL Track, Metrology Tools

## WORK EXPERIENCE

### NXP

#### Full-time, Process Engineer

JAN 2022 – JUN 2023

- 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

#### Full-time, Equipment Engineer

MAR 2018 – JAN 2022

- 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

### PPD

#### Part-time, PK Lab Coordinator

AUG 2005 – MAR 2018

- Supervisor of a pharmacokinetics laboratory
- Human specimen processing and laboratory prep
- IATA certification to ship hazardous materials

## EDUCATION

### Software Engineering, UT at Austin (Graduate Degree)

AUSTIN AUG 2021 – MAY 2024

Degree: Masters of Science

GPA: 3.3

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, Statistical ML

### 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, Semiconductor Manufacturing I & II, Analog and Mixed Signals, Signals and Systems, VLSI, Solid States, Fundamentals of CS, Linear Algebra, Differential Calculus, Modern Physics

## Defect Classification ML

NXP 2022

To overcome the manual classification challenge causing delays and resource investment in fab issues, we developed an innovative machine learning (ML) model. Trained on a substantial dataset, the model streamlined defect classification, proving its potential to cut costs and improve overall efficiency for the company

## 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.

## HDL Microcontroller

TEXAS STATE UNIVERSITY 2016

Designed a microcontroller on Xilinx using Verlog HDL. Notably, our team stood out as the sole group capable of successfully implementing a pipeline, overcoming the challenge even after the feature requirement was removed due to its perceived difficulty

## Video Game Development

PERSONAL 2016 – PRESENT

First starting video game development on an iPhone using Xcode with the swift language 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

## 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 using Python 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 Multism to run simulations and then implement with real hardware components on a breadboard and testing with Oscilloscope with FFT, DMM and signal generators

## Pro Z New Tool Start Up

NXP 2023

As the lead process engineer, I successfully managed the startup of a TEL Pro Z track with a Twin Scan Scanner, meeting the planned schedule. I optimized recipes for product qualification and addressed challenges with legacy recipes surpassing the vendor spin curve allowance. I developed an innovative spin coat technique, now adopted by TEL for its effectiveness in overcoming technical challenges

## Languages

A Z English (Fluent)

## Certificates and Prizes

2023	Six Sigma Green Belt Candidate
2022	Six Sigma Yellow Belt Certified
2021	Winter Storm Fab Recovery Contributor
2017	High Voltage Certified
2016	Dean's List
2016	Laser Safety Certified
2009	IATA Certified
2005	Scholarship in Chemistry

## Hobbies

- \* Playing Piano, Guitar, Ukulele, and Violin
- \* Jogging, Biking, Lifting Weights, Hiking, Swimming
- \* Cooking, Reading, Programming, DIY Projects