

Nolan Chang

nolanchang8@gmail.com | (626) — 202 — 9167
LinkedIn: linkedin.com/in/nolan-chang
Github: github.com/nychang1/Resume-and-Projects

SKILLS

- **Programming Languages:** C++, C#, ADA, Linux/Unix, Verilog, Python, SQL
- **Technologies/Tools:** Jira, Github/Gitkraken, VMWare, Bitbucket, Visual Studio, FPGA, PSPICE, Vivado, PyCharm, Matlab, Jupyter, Photoshop, Solidworks, AutoCAD

EXPERIENCE

Lockheed Martin Aeronautics

Fort Worth, TX

Software Engineer

January 2020 - Present

- **F16 Platform Development:** Developed, maintained and updated software for the F16 using ADA and C++. Often collaborated and engaged with other teams throughout the development life cycle.
- **Simulation Testing:** Tested developed features and code in an F16 simulation environment to verify correct functionality
- **Algorithms:** Created and adjusted algorithms for testing purposes
- **Agile Development and Teamwork:** Worked closely with teammates in an agile environment to develop working, deliverable code on a bi-weekly basis, with daily team meetings and bi-weekly demos

CyberPowerPC

City of Industry, CA

Marketing Associate

Mar 2016 - Jun 2018

- **Testing:** Tested different computer products for performance and benchmark comparisons
- **Electronics and Computer Conventions:** Worked at booths during electronic and gaming conventions by demonstrating virtual reality systems such as the HTC Vive and Oculus Rift as well as demonstrated high-end computer systems
- **Technical Writing:** Contributed technical writing pieces for CyberPowerPC computer and electronic products on major retailers such as Amazon, Walmart, and Best Buy

EDUCATION

California State Polytechnic University, Pomona

Pomona, CA

Bachelor of Computer Engineering

Sep 2014 - May 2019

Relevant Coursework: Object-oriented programming, algorithms, operating systems, data structures, CPU design and scheduling, circuit analysis, logical and sequential circuit designs, microcontrollers, FPGAs, control systems, power, signal processing, lighting and illumination engineering

PROJECTS

- **JPL Balloon Launch with Satellite Bounce Detection:** C++, Linux
 - Satellite attached to a helium-filled balloon with the goal of detecting a signal from the Sirius XM3 satellite and the bounce signal from the satellite onto a reflective surface such as a pool
 - Researched aspects of satellite communications, telemetry, and control
- **ZYNQ S-Curve Motion Controller with Configurable Kinematics:** Python, Verilog, C++
 - Created an open-source, multi-feature motion controller with user-definable kinematics seeking to improve the flaws of industrial and open-source motion controllers
 - Highly optimized S-Curve motion profiler, trajectory planner and PWM pulse generator using a combination of Verilog, Python, and C
 - Implemented homing logic and a safety supervisor
 - Functional prototype implemented on the PYNQ FPGA board
- **Scantron Scanning and Grading Application using Image Detection:** Python
 - Reads in an answer key and scantron submissions and outputs questions marked incorrectly using Python 3 with OpenCV
 - Uses image detecting parameters to read an image preferably in grayscale
 - Adaptive thresholding applied on a pixel-to-pixel basis to accurately display outlines
 - First implementation uses AND to superimpose both scantrons onto a single image for comparison
 - Second implementation uses XNOR to detect differences in the image, additional adaptive thresholding for enhancement, and a Gaussian blur to remove noise for blob detection

CERTIFICATIONS & SKILLS

- Certified SAFe Scrum Master/SAFe for Teams (ID: 78804471-5588)
- Certified Engineer-in-Training for Electrical and Computer Engineering (ID: 168007)
- Certified Solidworks Associate (ID: C-JGF9Y4MEA5)
- Spoken Languages: English, Mandarin Chinese