

Software Developer Software Developer C/C++ Software Engineer Flushing, NY C/C++ Developer with experience in STL, embedded systems, image processing, finance, and gaming. U.S. Citizen Authorized to work in the US for any employer Work Experience Software Developer FlexTrade Systems - Great Neck, NY October 2018 to Present Experience with C++ development on Linux, Git, JIRA, Gitlab, gathering requirements from clients, working with brokers to work out FIX session details, resolving production issues, and implementation and support of production electronic trading systems. Implement, customize, and support client-specific trade execution management system (EMS) solutions for buy-side financial clients. Created backend features including event-based FIX tag mappings and market data population, order auto-claim, and trade analytics. Created frontend features including filters, order flow menus, order management buttons, trade analytics display columns, send order window, order protection logic, alerts, etc. using a combination of C++ and FlexTrade API and design tools. Client has already begun trading millions of dollars worth of equities on my setup and will migrate all equities trading as well as other asset types such as futures, options, bonds, etc. Was responsible for deciding on purchase of \$20,000 software package to parse FIX logs across a network. Trained a team to assist with broker session setups which is now being called on by other teams within the firm to set up broker sessions. Created network client and server capable of handling multiple clients using sockets in C++ as a training exercise. Created Python script on Linux to collect and parse FIX logs on multiple different servers and also to create XML config files. Founder, Designer, Programmer Gestra Games - Remote August 2017 to October 2018 Experience developing in C++ and Blueprints, creating game-ready assets, creating a full Unreal Engine game from scratch, and using Git version control. Creating Gnosis: A 3D point-and-click game in Unreal Engine 4.16 with the goal of advancing diversity in gaming. Worked with writer and voiceover artists to create full story and script for the game. Used C++, UMG, and Blueprints in Unreal Engine to create UI and game logic. Blender for 3D modeling, GIMP for 2D texture editing and creation. Software Engineer Cognex Corporation - Natick, MA July 2015 to August 2017 Experience developing in C, debugging on PC using Microsoft Visual Studio, JTAG debugging using TI Code Composer Studio, learning and being able

to contribute to a large and complex code base, and using Clearcase and Git version control.

Worked on 5-person 1D barcode tools team in 25-person ID business unit to improve reading yield and speed of bar codes. Created new barcode print quality metrics calculation tool with updated decoder and edge detection modules to replace legacy tool. Identified issues in barcode decoder tools such as barcode quiet zone finding or 1D barcode finding and ameliorated them. Exposed additional decoder details to performance test for performance analysis and used this data to analyze performance deficits. Fixed various 1D decoder bugs filed through Clarify/Dovetail bug tracking system. Addressed customer issues for customers including Amazon. Analyzed and fixed 1D barcode decoder slowdowns of up to 5-15% between releases. Improved yield of low resolution barcode quiet zone finding and increased speed by 5x. Added a quiet zone candidate sorting function, which resulted in overall decoder speedup of 7% while preserving yield. Tightened parameters on 1D barcode finder to increase decoder speed-yield curve by ~1% at 30Hz while preserving overall yield. Performed experiments in Octave (open-source MATLAB clone) to determine if Harris corner detection could be used to discriminate text from code to save time spent on decoding false barcode candidates in cluttered shipping labels. Performed competitive evaluations of other barcode readers on the market to determine problem areas for Cognex readers.

Education Master of Engineering in Computer Engineering Cornell University - Ithaca, NY 2014 to 2015 Bachelor of Engineering in Biomedical Engineering, Electrical Engineering Vanderbilt University - Nashville, TN 2011 to 2014 Skills Assembly (3 years), Python (2 years), Matlab (4 years), C++ (3 years), C (5 years), Verilog (1 year), Java (Less than 1 year), Git (5 years) Links <http://hackaday.com/2014/12/22/smart-cpr-dummy-makes-sure-you-do-it-right/> <http://hackaday.com/2015/06/02/solving-rubiks-cube-with-an-fpga/> Awards Most Creative Design 2010-04 Most creative design in North Carolina statewide robotics competition

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