Y. Zed Yang

Website: yzy2.github.io
Email: yzy2@cornell.edu

Software engineer with 3+ years of experience in embedded systems software design, integration, verification, automation pipeline development, and product life cycle management

EDUCATION

CORNELL UNIVERSITY, ITHACA, NY May 2019
Master of Engineering in Systems Engineering GPA 3.84/4
  With emphasis in Project Development and Management

BINGHAMTON UNIVERSITY (SUNY), BINGHAMTON, NY May 2016
Master of Science in Electrical and Computer Engineering, GPA 3.56/4
  With emphasis in Information Assurance
Bachelor of Science in Computer Engineering, May 2015
  With emphasis in Digital System Design GPA 3.34/4

PROFESSIONAL EXPERIENCES

BAE SYSTEMS INC., WAYNE, NJ
Software Engineer/Product Owner – Navigation and Data Registeration May 2019 – Current
- Combining multiple legacy software code bases into a single product line and supporting three separate projects
- Creating system level automated tests and regression unit tests which speeds up the product roll out time for legacy software integration
- Reviewing and managing pull requests for code repository
- Creating a Jenkins environment and hosting it through a Docker container that is increasing test stand utilization by 100%

BAE SYSTEMS INC., ENDICOTT, NY
Software Verification Engineer – 777X Cabin Experience Network June 2018 – May 2019
- Developed behavioral-driven python test scripts for requirement-based test that saved over 50% of test development time
- Performed software vulnerability analysis using the STRIDE model that identified and addressed over 500 threats
- Worked with Jenkins server for continuous integration and regression test setup that saved over 50% of test rework and regression test time
- Received two companywide awards for exceeding customer expectation and innovative software development practices

Software/Systems Engineer – Hybrid Drive Bus/NextGen Energy Storage System June 2017 – May 2018
- Participated in short term scrum and backlog planning for hybrid bus software releases
- Created processor specific kernel functions for PowerPC microprocessor series
- Supported software releases for three customers and created custom software mods with regards to their needs
- Performed and developed regression tests for software bundles

Software Engineer – Research Project – Airborne Battery Management System Sept 2017 – Dec 2017
- Created a business proposal for Lithium-ion battery management system for aircraft use
- Created a demo battery management system prototype with test interface
- Performed a product reliability analysis and a failure mode and effect analysis for the system

Software Engineer – Project Freedom Trainer FCC June 2016 – May 2017
- Created software tools for test stand that translates hardware memory address to software variable
- Modified a python-based tool that allows testers to create C based test code through excel spreadsheet that resulted in a schedule saving of 30%
- Provided technical support on program specific software tools for remote testers
- Worked with RTOS board supporting package creation and mission critical software design

ACADEMIC PROJECTS

- **Model-based Systems Design for Hasbro** (2017). Multiplayer toy designed through design thinking, including customer affinity process, system requirements, house of quality, product life cycle development. –SysML
- **Covert Hardware Trojan Horse** (2016). A theoretically undetectable Trojan horse embedded in hardware through exploiting unused states in state machine. Verilog, Synopsis

- **Hardware for Neural Networks** (2016). - Dedicated hardware for neural networks to speed up sigmoid function execution and weights update. - Matlab, Verilog, Synopsis
- **Simple Dual Core Processor Design** (2015). - A dual core processor design with tests, performance analysis and throughput optimization. Verilog, Synopsis

CERTIFICATES

Machine Learning by Stanford University on Coursera   Aug 2019
Lean Six Sigma Green Belt by Cornell University   Dec 2018

TECHNICAL SKILLS

Software Development– C/C++, Python, Matlab, Bash script, Git
Hardware Development - FPGA design, VHDL, Verilog, Xlinx design suite, Synopsis
Others – Penetration Testing, Risk and Reliability Analysis, SysML/UML, Jenkins, Docker, Kubernetes, PCA, K-means, Neural Networks, Naïve Bayes, Wireshark, Cryptanalysis, OSI Network Model, REST API

ADDITIONAL EXPERIENCES

- BAE Systems, Inc. – Engineering Leadership Development Program Graduate, June 2016 – May 2019
- America Needs You – Volunteer Mentor Coach, Aug 2019 - Present
- Personal Website Design - Aug 2019