Kyle Salitrik

Aspiring Game Developer,
Electromechanical Engineer

LinkedIn /in/ksalitrik

+1 724 366 0852

http://github.com/NullFragment

ksalitrik@gmail.com

Skills

Mathematical Analysis

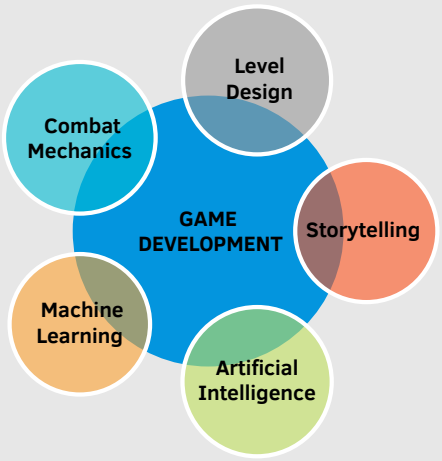
Test Automation

Microcontrollers

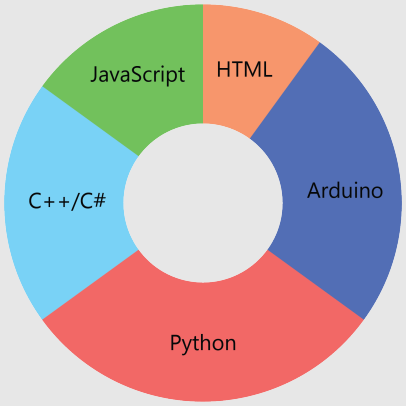
CAD *(Solidworks)*

Documentation

Interests



Languages



Education

2017–2019 (Expected) **BSc., Computer Science** — *Minors in Game Design and Mathematics*
The Pennsylvania State University
Erie, Pennsylvania, USA

2009–2016 **BSc., Engineering Science** — *Minor in Engineering Mechanics*
The Pennsylvania State University
University Park, Pennsylvania, USa

Research

2015–2016 **Undergraduate Thesis:** The Pennsylvania State University
Mechanical Properties of 3D Printed ABS and PLA Structures
This thesis examined the accuracy of predictions for the behaviour of 3D printed PLA and ABS objects based on size, density and material compared to linear, isotropic, homogeneous materials.

Professional Accomplishments

Mar. 2015 - Jan. 2017 **Electromechanical Engineer** — Advanced Acoustic Concepts

Software Engineering
- Automated software testing using BASH and Python in order to save hundreds of man hours.
- Implemented Arduino microcontrollers in order to automate hardware testing procedures.

Mechanical Engineering
- Created 3-axis vibration fixtures for multiple projects.
- Developed Solidworks models of a truss structure to adapt existing equipment to U.S. Naval ships for proposals.

Electrical Engineering
- Intimately involved with the development of new test systems created to replace systems nearing End-Of-Life.
- Designed and updated electrical schematics for custom built test fixtures.

Aug. 2012 - Dec. 2012 **Teaching Intern** — Penn. State Dept. of Engineering Science and Mechanics

Class: Statics
- Helped over 30 students comprehend subject matter and succeed in the course.
- Assisted with the creation of exams.

Certifications

Aug. 2015 **IPC J-STD 001** — AAC, Lemont Furnace, PA
Expires: Aug. 2017

Dec. 2015 **NFPA 70E** — Steel City Safety, Pittsburgh, PA
Expires: Dec. 2017

Apr. 2016 **Siemens TIA Portal Programming 2** — AWC, Inc., Houston, TX

May 2016 **Solidworks Essentials** — Prism Engineering, Pittsburgh, PA

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Hobbies

- Homebrewing
- 3D Level Design
- Bicycling
- Snowboarding

Detailed Job Experience

Mar. 2015 - Jan. 2017 **Electromechanical Engineer** Advanced Acoustic Concepts

Responsible for the development, design, and debugging of custom built test system software and hardware along with mechanical design of support systems and vibration fixtures.

Software Engineering:

- Arduino Programming:
  - Used microcontrollers for bit-wise control of legacy circuit cards to testing DAC, ADC, Counters, and other ICs.
  - Designed Arduino array for real time stabilization of generated PWM signals for control by using feedback loops.
    - Developed system to reduce the time for testing channels of power distribution units from 24 work-hours to under 5 work-hours.
- Scripting:
  - Used BASH and Python scripts to automate CPU stress-testing via SSH by network distribution of software and collection of logs.
  - Implemented Python scripts for installing software onto fresh Red Hat systems in order to reduce setup time.
  - Remastered Knoppix distributions to display system status to built-in LCD panels, eliminating the need for test technicians to connect a KVM unit to each node and manually check them.
- Miscellaneous:
  - Created and debugged pieces of LabVIEW code to ensure tests followed specifications set forth by the customer.
  - Virtualized EOL hardware as four FFF replacement units deployed in one server, reducing shipboard system footprint and costs.

Mechanical Engineering:

- 3-Axis Vibration Fixtures:
  - Instrumental in designing an adjustable fixture for 1-2U rack-mounted units on rails of varying standardized lengths up to 2kHz.
  - Created a fixture for testing various Hammond Enclosures according to military standards for 33Hz-1kHz.
- Designer of a truss structure to support modular equipment loaded onto Naval ships.
- Primary designer for the proposal of a lightweight ISO container system.

Electrical Engineering:

- Schematics:
  - Created multiple test enclosures for Arduino systems used to test Legacy CCA functions.
  - Developed schematics for a main input/output chassis and cabling of Specialized Test Equipment (STE) totaling over 1800 signals.
- Vital in working with a parent company DRS and the U.S. Navy to identify replacements for EOL components.

Aug. 2012 - Dec. 2012 **Teaching Intern** Penn. State Dept. of Engineering Science and Mechanics

Assisted the Engineering Science and Mechanics faculty in teaching Statics. Responsibilities included holding office hours to provide students help with understanding the material, provide on-demand tutoring, assist in grading homework and exams, and developing test questions.