Kyle Patrick **Salitrik**

PROGRAMMER · ELECTROMECHANICAL ENGINEER

ADDRESS

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Work Experience

The Pennsylvania State University
University Park, PA, USA

UNDERGRADUATE RESEARCH INTERN
MAY 2017 - PRESENT

- **Programming** | Python, Keras, Tensorflow, CNTK
  - Developed Python scripts for automating and randomizing software tests
  - Trimmed unnecessary libraries from deployed software
  - Prototyped Logistic and Linear regression Machine Learning Algorithms in Matlab
  - Used Keras with Tensorflow & CNTK to prototype Neural Networks

Advanced Acoustic Concepts
Uniontown, PA, USA

ELECTROMECHANICAL ENGINEER
MAR 2015 - JAN 2017

- **Software & Hardware Engineering** | Test Automation, Arduino, Python, BASH, AutoCAD Electrical
  - Utilized BASH scripts and Knoppix to automate server tests by printing status information to a built-in LCD panel
  - Automated mprime CPU stress tests via SSH using Python scripts to deploy the service and collect logs
  - Designed test fixtures using Arduino microcontrollers to automate hardware testing of CCAs using bitwise control of ICs
  - Created Arduino array to deliver real-time, self-correcting PWM pulse generation by polling output
- **Mechanical Engineering** | Solidworks, Inventor
  - Developed adaptable 3-axis vibration test fixture for up to 2U, 30-inch servers and frequency range up to 2kHz
  - Created vibration test fixture to accommodate various sizes of Hammond enclosures for low-frequency MIL-SPEC testing
  - Designed modular truss structure for supporting mobile winches on ships with the goal of being hot-swappable for missions

The Pennsylvania State University
University Park, PA, USA

TEACHING INTERN (STATICS)
AUG 2012 - DEC 2012

- Held office hours to help students comprehend subject matter and complete homework
- Assisted with creation of exam problems and proctored exams

Projects

Parallax (Link: Development Log)
Personal Project

UNREAL ENGINE
MAR 2017

- Parallax was my first attempt into true game design and a great learning experience. The end product is the framework for a 3D side-scrolling cover shooter. The game starts in a side-scrolling view that provides greater visibility but lacks accuracy in aiming. Players may switch to an over-the-shoulder 3rd person shooter view in order to accurately aim, at the sacrifice of how far in front of themselves they can see. Along with typical side-scrolling elements, the 3rd dimension of depth into the screen adds another element of concern for the player.

Oculus Drift
HackYSU

C#, UNITY
FEB 2017

- OculusDrift was an experiment in audio-visual entrainment employing Unity (C#) and the Oculus Rift. The purpose of the project was to create a relaxing environment by using binaural audio and simulating the user floating through a star field.

Education

The Pennsylvania State University
University Park, PA, USA

B.S. IN ENGINEERING SCIENCE & COMPUTATIONAL DATA SCIENCE
Expected: Aug. 2019

- Minors: Engineering Mechanics, Mathematics
- Thesis: Effects of Print Orientation, Fill Density and Size on 3D Printed Structures

Professional Memberships

IEEE	**Institute of Electrical and Electronics Engineers,** Computer Society	*2017*
ACM	**Association for Computing Machinery**	*2017*
IGDA	**International Game Developers Association**	*2017*
ASME	**The American Society of Mechanical Engineers**	*2017*