CORBIN FRISVOLD

Freelance Engineer of Things

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PROJECTS

Machine Learning

- Proficient with SciKitLearn, Keras, and Tensorflow
- Current focus in data analytics and reinforcement learning
- Specifc work can be found at https://maker.godshell.com/archives/tag/ml

Computational Evolution of 3D Soft Robots

- Current exploratory research at Lafayette College
- Using evolutionary algorithms to evolve and optimize organic soft robots in multiple environments

Simulating and Analyzing the Spread of Diseases

- Research for PJAS States Competition 2019
- Modified the SIR Model to utilize vital dynamics
- Built Python software to analyze data output into user friendly formats

3D Printing and Design

- Designed upgrades for personal printers using Arduino Mega 2560, RAMPS 1.4, and customized Marlin Firmware
- Utilized Fusion360 and OpenSCAD to design 3D models for various projects

COVID-19 Response

- Worked with makers in local area to organize fabrication and donation of face shields to St. Lukes Hospitals and Abington-Jefferson Hospital
- Received donations from Syccure to obtain more printers and filament to speed up manufacturing

TALKS CLASSES

HOPE 2020

- Workshop - Teaching an Arduino to Think
- Talk - How Much Food Coloring Can Your Robot Handle? An Intro to Poisoning Machine Learning Systems

PJAS 2020 - Evolution of 3-Dimensional Soft Robots

- First place at regional competition, states cancelled

PJAS 2019 - Simulating and Analyzing the Spread of Diseases

- First place at regional and state competitions

BSides Delaware

- Processing 101
- System Administration for Kids

HOPE 2018 - Inspiring the Next Generation of Hackers

EXPERIENCE

Technology Blog

Corbin's Confounding Computers

July 2018 – Present maker.godshell.com

- Technology blog detailing current work and projects
- Projects range through 3D Printing, Machine Learning, Pure Mathematics, and Competition Programming
- Created comprehensive solutions for programming competition sets

ACHIEVEMENTS

- Founder of Mathematics Club and president of Programming Club at Jim Thorpe High School
- Operator of SpawnCamp, a village at infosec conferences that focuses on child enrichment in fields such as cybersecurity, mathematics, and programming

HONORS & AWARDS

- First place at Pennsylvania Junior Academy of Science States 2019
- AP Scholar Award 2020
- National Honor Society member

SKILLS

- Wolfram, LaTeX - Strong
- Java, Python - Proficient
- C, C++, R - Developing

EDUCATION

College

Lehigh Carbon Community College

August 2018 – Present

Mathematics A.S.

- In custom program to receive Mathematics A.S. at the same time as High School Diploma
- Notable coursework includes Calculus I, II, and III, Differential Equations, Linear Algebra

High School

Jim Thorpe Area High School

August 2017 – Present

- Notable coursework includes AP Computer Science A, AP Calculus AB, AP Literature, MIT 6.00SC, 18.01SC, and 18.02SC
- Independent Study - Studied cryptography, quantum computing, evolutionary algorithms, and artificial intelligence
- Designed new MakerLab and Cybersecurity course curriculum for school

Math Club

- Founder of club with focus on teaching problem solving skills and mathematical intuition
- Competed in Harvard-MIT Math Tournament and Lehigh University Math Competition

Programming Club

- President of club with specific focus on problem solving using Python
- Placed second in Bloomsburg Drone Wars and second in PA National Guard Wi-Fighter