

David Lin

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EDUCATION

University of Illinois Urbana-Champaign

GPA: 3.6/4.0

Bachelor of Science in Computer Engineering

Aug. 2020 – May 2024

Relevant Courses: Introduction to Data Structures and Algorithms with C++, Analog Signal Processing, Digital Signal Processing, Probability with Engineering Applications, Physics Mechanics, E&M, Quantum, Thermo

EXPERIENCE

Unity AR Internship

Winter 2020

Potions and Pixels

Remote

- Developed a cross-platform Unity Engine app in C# using ARFoundation from start to finish
- Allows a user in a pre-defined location such as a street corner to view AR (Augmented Reality) recreations of objects such as historical buildings with accurate positioning and scale in the real world
- This application was used to successfully land a contract for further development

PROJECTS/ACTIVITIES

Illinois Motorsports FSAE and Supermileage | Kicad Creo LTSpice CubeIDE

Aug 2021 – Present

- Designed front-end circuits for measuring the current draw on a battery, using hall effect and shunt resistors
- Worked in small teams of 2-3 to design and CAD model the clutch lever and steering wheel electronics enclosure

Univ. of California, San Diego COSMOS Program | Keras Tensorflow Python Git Fusion360

Summer 2019

- Used CAD Software, 3D printer, and laser cutting to design components to retrofit 1/10 scale RC cars with the necessary hardware to drive autonomously
- Programmed it to run a racetrack autonomously using OpenCV and Tensorflow using a camera and a RaspPi
- Reconfigured algorithm from the UCSD supercomputer to run without a library file

CyberPatriot Cybersecurity Team | Linux Windows Cisco

2017-2019

- Participated in national cybersecurity competition offered by the US Air Force Association
- Secured Linux, Windows, and Cisco operating systems by detecting and removing vulnerabilities
- Co-founder of student team at Taft High School, Qualified for silver semi-finals in both years

84PlusPlus | C# .NET Core

- Developed a c-style language which compiles to Ti-Basic, which can run on the Ti-84 family of calculators.
- Features include a LL1 Parser, a tokenizer, and a code generator

ChannelAdder | Python Keras Tensorflow FFmpeg CUDA

- A project which attempts to upmix stereo sound into 5.1 surround sound using a Fast Fourier Transform then a Convolutional Neural Net

Neural Net | C#, Windows Forms, Monogame/XNA

- My made-from-scratch neural net used for the following AI projects
- Smartybird: Used a genetic learning algorithm to play a recreation of the popular game 'flappy bird'
- Sinewave: Used a back-propagation learning algorithms to find missing points in a sine wave (or any other function)

Chopsticks | C#, Windows Forms

- Developed a Monte Carlo AI which plays the street game Chopsticks, with different difficulty levels
- Includes a Windows Forms GUI to play the game

TECHNICAL SKILLS

Languages: C#, C/C++, Java, SQL, Kotlin, Python, JavaScript/TypeScript, Assembly

Developer Tools: Git, Docker, VS Code, Visual Studio, Unity Engine, IntelliJ, Eclipse