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Bryan Z Zhu

Senior undergrad – Electrical Eng. & Comp. Sci.

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Education

Rutgers University School of Engineering
New Brunswick, NJ 2018 - Present
Cumulative GPA 3.93/4.00 – Dean's List – est. grad. May 2021

Brookdale Community College
Lincroft, NJ 2017 - 2018
Cumulative GPA 4.00/4.00 – Dean's List

Cornell University College of Engineering
Ithaca, NY 2011 - 2016

Holmdel High School
Holmdel, NJ 2007 - 2011
Cumulative GPA 4.36/4.00

Personal Projects

Custom Split Keyboard PCB
> (ongoing) Designing a split ergonomic keyboard running QMK firmware; wanted additional utilities and key layout that suited typing habits better than the Ergodox layout

Raspberry Pi Alarm Mat
> (ongoing) Assembling talking alarm clock and calendar activated by self-made Velostat pressure mat

Home Network-Attached Storage (NAS)
> Set up backup NAS with ZFS file system for data redundancy that serves as IP security camera NVR (Network Video Recorder) and will eventually host virtual machines

BCI Tree Shadow Display
> Created virtual setpiece in Unreal Engine 4 affected by human-worn electroencephalogram where leaf and branch shadows are influenced by brainwave inputs from a commercial BCI (Brain-Computer Interface) device

Achievements

Rutgers University James J. Slade Scholar 2020 - 2021
> Researching thesis on wearable spectrophotometer for hematocrit measurement for monitoring anemia

HackRU Hackathon "Best Car App" 2019 March
> Built proximity-based notification system using SmartCar Python SDK, Google Maps API, and Twilio API to send SMS or voice calls when smart-car crosses user-defined borders

Outstanding Research Writing Project at Rutgers Undergraduate Research Writing Conference 2019

iCIMS Hackathon "Best use of API" 2018 October
> Conducted data exploration using hackathon API to discover the most common skills among successful job applicants

Cornell University College of Engineering Jacobs Scholarship 2011 - 2013

Skills

Software Development
Python Java C C++ Verilog SystemVerilog
Git GitFlow Bash Shell MATLAB JavaScript
Subversion SQL LaTeX HTML CSS

Microcontrollers and SBCs
STM32 (HAL libraries for CAN, I^2C, UART, GPIO) Arduino
Jetson Nano Raspberry Pi

Machine Learning
Keras Tensorflow NVIDIA DeepStream

General
Linux (Ubuntu, Raspbian) UNIX (FreeBSD)
Sublime Text Scrum and Agile methodologies
Soldering 3D printing CAD (Autodesk Fusion 360)
Microsoft Office (Word, PowerPoint, Excel, SharePoint)
Adobe Suite (Photoshop, Premiere Pro)

Experience

Telemetry Lead and Electrical Engineer on Rutgers Solar Car Team 2019 - Present
> Leading creation of telemetry pipeline based around the STM32 microcontroller with the purpose of remotely monitoring vehicle metrics in order to help mission control formulate competitive racing strategies

Academic Chair on Tau Beta Pi NJ Beta Chapter 2020 Aug - 2020 Dec
> Organized research night for the Rutgers community in order to inform students about research opportunities

Junior Research Engineer at SubUAS 2020 Aug
> Advised mechanical engineers on object detection methods in order to improve performance of Coral Accelerator setup

Smart Intersection Project Intern at WINLAB 2020 June - 2020 July
> Created vehicle tracker and counter for live intersection footage using YOLOv3 object detection running on NVIDIA DeepStream in order to estimate traffic flow and compare vehicle quantities across different days and time periods

Software Engineering Intern at iCIMS 2019 June - 2019 Aug
> Built and trained Keras RNN (LSTM for natural language processing) to suggest job description text for recruiters in order to expedite creation of effective job applications

Programmer and System Administrator on Cornell Violet Nanosatellite Project 2012 - 2016
> Coded mission control procedures and managed team knowledge base in order to carry out mission set forth by US Air Force and maintain team productivity levels