

# David S. Wang

## Software Engineer

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## Relevant Experience

### Software Engineer @ Guile Technologies

Sept 2019 – Current // Las Vegas, NV

- ▷ Lead developer of smart barbell tracker, responsible for embedded hardware design and companion app design (written in flutter)
- ▷ Developed method to reliably calculate relative positions of sensors

### Embedded Software Intern @ BD (Becton Dickinson)

Sept 2015 – July 2016 // San Diego, CA

- ▷ Worked on hardware/software upgrades for Alaris infusion modules, including integration of WIFI capability
- ▷ Designed and implemented testing automation software for the Alaris Infusion modules using python Robot Framework.

### Software Engineer Intern @ Carefusion

Jun 2015 – Sept 2015 // San Diego, CA

- ▷ Designed and implemented internal tool for project deadline estimation.
- ▷ Using past data the program tags then weighs keywords from project description. The resulting model was 87% accurate.

## Personal Projects

### wardrobeOS

- ▷ Android application for wardrobe organization and outfit recommendation.
- ▷ Suggestion algorithm takes into account of seasonal colors, daily weather, and overall outfit color coordination.
- ▷ Barcode(UPC) functionality allows easy entry of newly purchased items.

### Pokemon RPI

- ▷ Designed and created the classic Pokemon game in the settings of RPI campus. Implementation includes custom built battle engine.

### Image stitching (panoramic)

- ▷ Program determines if a set of images are of the same object/scene and creates a montage/panoramic by stitching the images together.
- ▷ Extracts keypoints using SIFT and constructs K-D tree for KNN key point matching.
- ▷ Fundamental matrix estimation and homography estimation are use to determine alignment of images for proper stitching.

### BNO055 sensor tools

- ▷ Collection of diagnostic and visualization tools for the Adafruit 9-DOF IMU Plot3D displays live sensor position in 3D space
- ▷ DataPlotter splits live data into separate X, Y, Z graphs. Allows you to apply Custom filters and multiplier to each axis.

## Skills

### Programming Languages

Python, R, C, C++, C#, Dart, Java, SQL

### Libraries and Tools

Docker, Kubernetes, Numpy, Pytorch, Scikitlearn

Pandas, Flutter

## Education

### Rensselaer Polytechnic Institute

M.S. Quantitative finance and risk analytics

B.S. Computer Science

Minor in Economics and Applied mathematics

## Relevant Coursework

- ▷ Data analytics
- ▷ Computational finance
- ▷ Computer vision
- ▷ Database systems
- ▷ Networking in the Linux kernel
- ▷ Financial simulation
- ▷ Adv AI/Machine Learning for finance

## Interests

Linux, Arduino, Power Lifting, Finance