David S. Wang

Software Engineer

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Relevant Experience

Software Engineer @ Metasoma Technologies
Sept 2019 – Current // Las Vegas, NV

- Lead developer of smart barbell fitness tracker, responsible for embedded Hardware design and companion app design (written in flutter).
- Developed method to reliably calculate relative sensor positions and map the Barbell to 3D space.

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