John W. Sha

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Education:

University of California, Berkeley *Expected graduation: May 2020*
B.A. Data Science & Mechanical Engineering (Minor)

Skills:

Technologies: Python, Java, JavaScript, HTML, MATLAB, MySQL, pandas, scikit-learn, Flask, Bootstrap, OpenCV
Coursework: Intro to Machine Learning, Medical Device Design, Entrepreneurship Bootcamp, Intro to Artificial Intelligence, Probability, Principles of Data Science, Data Structures, Solid Mechanics, Thermodynamics

Professional Experience:

Ooma *Sunnyvale, CA*
Software Engineering Intern *May 2019 - Present*
- Investigated feasibility to run facial recognition models on CPU constrained edge devices
- Evaluated and validated vendor claims of software model and hardware acceleration performance
- Full-stack development with Docker, Flask, Bootstrap, and pexpect of a dashboard for automating edge device status retrieval and ability to remotely power cycle and reserve devices for deploying tests

Goodly Labs *Berkeley, CA*
Software Developer *Jan 2019 - Present*
- Used HTML, JavaScript to develop a Chrome extension to overlay news article analysis with highlights and D3 visualization in order to show biases, strengths, and weaknesses for nonpartisan assessments
- Leveraged phrase matching instead of index matching to find exact points for highlighting words/phrases

Course Staff: Principles of Data Science (Data 100) *Berkeley, CA*
Lab Assistant *Jan - May 2019*
- Assisted in weekly lab sections, answered questions, and guided students on topics including linear regression modeling, cross-validation, pandas

Finelite *Union City, CA*
Mechanical Engineering Intern - Product Development *Jun - Aug 2018*
- Designed and prototyped luminaire bodies and installation brackets; top-down design
- Increased product family range by 3 new products, worked with QC engineers for paint quality assurance
- Decreased light fixture optical cavity by 66% and body height by 38% while meeting light output goals
- Maximized existing, shared parts between light products; created 2ft prototype fixture for demonstration

UC Berkeley Formula SAE *Berkeley, CA*
Formula SAE is a student engineering group that designs, builds, and races a formula-style racecar every year.
Engine Team Lead *Jun 2018 - Mar 2019*
- Managed design, manufacturing, and testing of engine system (nine members, six systems within engine)
- Optimized engine fuel and ignition maps through engine control unit (ECU), acquired and analyzed data
- Maintained dynamometer and car engines, diagnosed and fixed electrical and combustion issues

Engine Team Member *Sep 2016 - Jun 2018*
- Designed intake system for 2018 and 2019 car, exhaust system for 2017 and 2018 car

Projects:

OpenCV Real-Time Webcam Face Recognition
- Used webcam input to detect faces and take still images for building a facial recognition training dataset
- Bounding boxes drawn around detected faces which are then compared to trained dataset for recognition
- Calculated processing time for comparison to other facial recognition models/libraries

Drink Dispensing Robot | bit.ly/mixabot
- Built an Arduino controlled robot that dispenses mixed drinks using a turntable and button selection UI
- Managed component selection, Arduino control, and rapid prototyping with laser cutting and hand tools