

# Ari Bennett

aridbennett@gmail.com

www.aribennett.com (Design Portfolio)

## The Hillman Group

Technology Director

2021 to present

- Directed a team of engineers doing research and development on a next generation home and auto key kiosk
- Invented computational strategies for inverse kinematics, toolpathing, computer vision and path planning

Resharp Technology Director

2019 to 2021

- Developed a Linux platform deployed on 2000 kiosks nationwide
- Led a multidisciplinary team integrating the Resharp product into the existing MinuteKEY management and observability platform, eliminating the need for dedicated Resharp customer service and support staff
- Designed and built out services managing communications, robotic controls, software deployment, firmware deployment, user interaction, observability and analytics on hundreds of deployed kiosks
- Architected and implemented tools, data model and underlying architecture for the operation of a distributed fleet of machines to enable continuous improvement, and reduce on call load to near zero
- Designed motor commutation and feedback control systems to reduce cost and improve reliability and observability of embedded systems, allowing remote troubleshooting and history analysis of hardware issues

## Resharp

Cofounder and CTO

2017 to 2019 (acquired by the Hillman Group)

- Led initial mechanical, electronic, and software prototyping and development while for an automated knife sharpening kiosk (resharp.com).
- Grew the team and managed the technical requirements and execution of all three disciplines
- Ran reliability testing to validate full stack design and built the tests and observability tools required to close the loop and refine products

## Stanford Product Realization

Lab Teaching Assistant

2015 to 2017

- Coached introductory and advanced design courses at the Stanford Product Realization Lab as a teaching assistant. Instructed over 500 students how to execute their projects and how to approach ideas from the standpoint of feasibility, value and aesthetic
- Ran operations, training and safety oversight in the Product Realization Lab Machine shop
- Taught graduate coursework in computational 3D printing design

## Boosted Boards,

Mechatronics Intern

2015

- Designed an electric skateboard controller and managed user testing and DFM

## KIWI GMBH

Mechanical Engineering and Product Design Intern

2014

- Owned and developed the ID, user testing and DFM for a consumer keyless entry solution

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## Programming

Python, C++, C, C#, Java, Javascript, Matlab, PIC Assembly, SQL, Terraform, AWS, Vue, React

## Computer Aided Design

Solidworks, Fusion 360, Autocad, EagleCAD, Altium, KiCad, Rhino, HSMWorks, GCode

## Prototyping

Machine shop and foundry tools, electrical prototyping, hardware spin-up and troubleshooting

## Computational Numerics

Scipy, Numpy and OpenCV for kinematic modeling, path planning, image and data analysis

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## Education

Stanford University, Mechanical Engineering, BS 2015, MS 2017