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 operating a distributed fleet of machines to enable continuous improvement and reduced the on call load to near zero
- Created motor commutation and feedback control systems to reduce cost and improve reliability and obeservability 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 for an automated knife sharpening kiosk deployed as a "hardware as a service" product (resharp.com)
- Grew the team and managed the execution of all three disciplines, leading integration and top level design
- Ran reliability testing to validate full stack design and built the tests and observability tools required to close the loop and extend kiosk life

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

---

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

---

Education
Stanford University, Mechanical Engineering, BS 2015, MS 2017