Ari Daniel Bennett

aridbennett@gmail.com, www.aribennett.com (Design Portfolio)

Software

Developed a linux platform used for a kiosk put into nationwide service, building out services managing communications, robotic controls, software deployment, firmware deployment, user interaction, observability and analytics. Created tools and underlying architecture for operation of a distributed fleet of machines, and well as the data model to enable continuous improvement to better anticipate customer needs and perform fleetwide prognostics. Integrated numerous other software systems as part of an aquisition, and lead architecture development for a nationally scaled product fleet with a team of engineers. Was responsible for every part of the tech stack, from services in the cloud handling analytics and observability, to implementation and deployment of embedded firmware in the field.

Mechatronics

Developed numerous controls systems for various projects, including motor commutation, feedback control, inverse kinematics, toolpathing, computer vision and path planning. Did initial mechanical, electronical, and software prototyping and development before growing the team and taking over managing 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.

Design

Did novel invention and iteration for multiple robotic products, taking them through all product phases from prototype to scaled manufacturing. 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.

Programming

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

Computer Aided Design

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

Prototyping

Extensive experience with standard machine shop and foundry tools, electrical prototyping, hardware spin-up, and working with rapid vendors in for quick iteration and integration of mechanical and electrical systems.

Computational Numerics

Scipy, Numpy, Opencv and use of AI Models for kinematic modeling, path planning, image and data analysis.

Work Experience

The Hillman Group, Resharp Technology Director, 2019 to present

Created architecture and tools to enable scaling of Resharp nationally and lead new product R&D

Resharp, Co-Founder and CTO, 2017-2019

Lead full stack product development and invention

Stanford Product Realization Lab Teaching Assistant, 2015-2017

Ran the machine shop, in addition to teaching design curriculum

Boosted Boards, Mechanical Engineering 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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Education

Stanford University, Mechanical Engineering, BS 2015, MS 2017