

Education

Stanford University - GPA 4.0

B.S. Mechanical Engineering & B.A. East Asian Studies

- Making Multiples: Scaled Manufacturing Tooling - ME 325
- Computer-aided Product Creation - ME 318
- Silversmithing and Design - ME 298
- Materials and Manufacturing - ME 219
- Design and Manufacturing - ME 203
- Deliverables, ME Design Practicum - ME 181
- Heat Transfer - ME 131A
- Mechanics of Materials - ME 80
- Fluids Engineering - ME 70
- Thermodynamics - ME 30
- Dynamics - ENGR 15
- Digital System Design - EE 108
- Circuits I - EE 101a
- Design for the Circular Economy - CEE 144
- Entrepreneurship without Borders - MS&E 272
- Biomedical Innovation Incubator - MED 275B

Sept 2015 - Sept 2019
Stanford, CA

北京大学 (Peking University)

Quarter abroad

- China's Development, high tech/start-up - OSPBEIJ 27
- China's Economic Development - OSPBEIJ 24

March 2017 - June 2017
Beijing, China

Visual Portfolio

www.brandon.life - Design for Manufacturing, CNC, Injection Molding, Turning, Milling, Additive Manufacturing, CAD, Product Design... A further exploration of this resume and a visual overview of projects.

Experience

IDEO — Industrial Design/Mechanical Engineering Intern

- Utilized anthropological methodologies in field research and new product sessions for multi-national corporations seeking entry into China and South Korea consumer markets — electric cars, coffee, cosmetics. Documented customer journeys, synthesized needs, developed brand value propositions.
- Business development and experience based design. Developed prototypes (SolidWorks) and virtual reality to foster storytelling and product ideation.

July 2017 - Sept 2017
Shanghai, China

Intel — Embedded Systems Engineer

- Solar energy harvesting scuba diving computer/watch, integrated NTV Cortex M4 microprocessor with memory LCD, pressure sensor, temp sensor, and 9-axis (accel, gyro, mag)
- Designed hardware schematic, engineered enclosure, wrote all firmware (C) and iOS app (Swift), designed UI, and performed power analysis on device

June 2016 - Dec 2016
Santa Clara, CA /
Hillsboro, OR

IBM — Cloud Computing Researcher

- Crowdsourced curation platform on the blockchain, solely designed and built
- iOS and OSX clients (Objective-C) using HTTP protocols and a Node.js server (Python)

June 2015 - May 2016
San Francisco, CA

August Home, Inc. — iOS Software Engineer

- Co-developed iOS app (Objective-C) for August Smart Lock, used for keyless home entry and secure key sharing. Worked in all stages of product development cycle.
- Extensively worked on Auto-Unlock using geolocation and RSSI to determine user location, integrated further with REST APIs, stabilized bluetooth communication with lock hardware

June 2014 - Aug. 2014
San Francisco, CA

Projects

- Shui2Go - pollution mask for China that filters both air and water: ID, CAD(SolidWorks), 3d printing, MatSci **www.shui2go.com**
- CookSafe - a safer gas stove; remove pan and gas line closes, place pan down to reignite: designed, milled & turned 34 of 70+ parts
- Laparoscopic Surgery: device design, rapid prototyping, user testing
- H.I.G. - Heat Intensive Gloves: need specification, fully functioning prototype and packaging
- Prosthesis: prototyped/constructed hand, wrote firmware (C) with EMG data interpolation to drive hand

Patents

- U.S. Patent 9,942,768 — Frank, et al. 2018. Verifying a user utilizing gyroscopic movement.
- U.S. Patent 10,318,979 — Frank, et al. 2019. Incentive-based Crowdvoting Using A Blockchain.
- U.S. Patent 10,267,868 — Latone, et al. 2019. Identifying a location of an audio device relative to a mobile device.