JOHN MORELAND

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EXPERIENCE + EDUCATION

apple - *product design*
mac architecture
2017-2018

- Designed, fabricated, and tested prototypes of developing products
- Worked cross functionally with teams to fulfill industrial design, thermal, and acoustic product requirements
- Created experience models
- Heavily utilized rapid prototyping techniques including laser cutting and 3D printing (polyjet)
- Machined and reworked parts using mills, lathes, bandsaws, etc.
- Coordinated with vendors to manufacture parts on tight timelines
- Analyzed part tolerances via x-ray and structured light 3D scans
- Traveled overseas to assembly line

olin college
robotics engineering
2015-2019

- Expected graduation: December 2019
- Project-based learning environment
- Notable coursework:
  robotic systems integration
  user-oriented collaborative design
  affordable design and entrepreneurship

boosted boards
mechanical engineering
2016 summer

- Prototyped lightweight electric vehicles as part of the new product team
- Designed and fabricated electro-mechanical subassemblies
- Researched and ran urban transport experiments

cafe x
mechanical engineering
2017 summer

- Designed and tested future iterations of the robotic cafe and peripherals
- Established internal mechanical engineering infrastructure
- Expanded in-house prototyping capabilities

simplehuman
research + development
2014-2015

- Developed household products that improve daily tasks
- Created first-pass prototypes for proof of concepts after teaching myself arduino and basic circuit design
- Reverse-engineered rival products

PROJECTS

rolling plotter
robotics, mechanical design
2018-present

- In three weeks, I designed and built a 3-axis CNC sharpie plotter for drawing on 31" tyvek rolls.
- Prototyped entirely using 80/20, lasercut parts, McMaster components, and electronics
- Originally used for printing ~150 feet of poster for an educational conference hosted by Olin.
- Currently working to add expansions, improve reliability, and document the system - *Inspired by Thibault Brevet*

cassava grater
mechanical engineering
present

- Designing an accessible, electric cassava grater for low-income women in Ghana as part of an affordable design and entrepreneurship capstone class
- Currently rearchitecting the machine to reduce part count, cost, and sourcing issues
- Analyzing bearing failures in harsh environments

penny press
mechanical engineering
present

Working with an artist-in-residence to create sculptures from notched pennies. Helping design an automated penny press and clamps for assembly.

design for shamans
user experience design
2017 spring

Interviewed and co-designed with urban shamanic healers to design a coffee shop + shared communal space that is grounded in their values.

CNC egg decorator
robotics, mechanical engineering
2016 fall

Designed a 3-axis cylindrical CNC machine capable of drawing vector shapes onto eggs. Fabricated with lasercut and 3D-printed components.

small-scale anodizing
material science
2018 fall

Designed a simple anodization bath with two classmates. Analyzed effects of current density and time on thickness and uniformity of anodic layer.

SKILLS

prototyping
mill (manual, CNC)
lathe (manual, CNC)
laser cutter (epilog, trotec)
3D printer (FDM, polyjet)
sand blasting
circuit design + soldering

analysis
3D scanner (structured light, X-ray)
instron
OMM + CMM
SEM

cad
NX
solidworks

code
python
arduino
matlab

software
illustrator
photoshop
indesign