# Boqi Zhou

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## EDUCATION

**Columbia University, Columbia Engineering** — New York, NY
MS in Mechanical Engineering — Expected Dec 2021

**Iowa State University** — Ames, IA
BS in Mechanical Engineering — May 2020
Highest 2% LAS freshman Spring 2016

Course include: Abstract Algebra, Math Analysis, System Dynamics and Control, Heat Transfer, Mechanical System Design, Mechanical Component Design, Engineering Measurement

## EXPERIENCE

**RAM vessel design** — Ames, IA
**Role: Project Leader** — Aug 2019 - Dec 2019

- Leaded a team with 5 people to design a vessel for Resodyn Acoustic Mixer to save mixing time
- Built Solidworks model, studied stress analysis, and tested different material
- Filled in D-FMEA table and analyzed benefit of 5 different designs. Selected best design according to its lower cost, better structure, and higher efficiency
- Contacted with 3 Honeywell's engineers to share process of project every week for 4 months, met with team every day to analysis data
- Presented final work on public exhibition to engineering students and Honeywell's engineers, discussing next improvement and expressing new opinion
- Final product improved efficiency of homogeneous mixing of particles for sponsor, and saved 20% of mixing time

**Recycling** — Ames, IA
**Role: Project Member** — Jun 2018 - May 2018

- Worked with 5 different countries' teammates to design a bottle strand production unit to recycle plastic waste
- Created mathematical modeling, conducted force analysis, and selected materials for machine
- Optimized machine by increasing spool arm thickness, extending base, using pins for spool hooks instead of screws, and changing a different blade or more durable blade material
- Manufactured 3 different prototypes with team in wood lab and compared cost and efficiency. Carried out tests of functionality, lifespan, and consistency for machine
- Compiled a 61-page paper, "Final Design and Business Plan", discussing analysis with instructor and other teams; presented new methods to improve functions and design
- Received most votes in 10 teams. Video link: https://www.youtube.com/watch?v=tGgJDV5uJMg

## SKILLS

**Programming**: Python, MATLAB, Solidworks, Photoshop
**Data Analysis:** Spark, Excel
**Applications:** Linux (Ubuntu), Android Things
**Languages:** Chinese (native), English (fluent)