XINGLONG LI

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EDUCATION

University of California-Berkeley, College of Engineering **Berkeley, CA**

Master of Engineering Degree Candidate in Mechanical Engineering, Product Design *August 2022 – May 2023*

University of Wisconsin-Madison, College of Engineering **Madison, WI**

Bachelor of Science Degree in Mechanical Engineering (GPA: 3.57/4.0) *September 2018 – May 2022*

PROFESSIONAL EXPERIENCE

Beijing Yunji Technology Co., Ltd. **Beijing, China**

Chassis Structural Engineer *May 2021 – August 2021*

- Designed strength testing device for laser sensor used on robots and structural components of the robot, such as locking mechanism used for securing cargo and battery box.
- Independently assembled two sets of lidar vibrating tables.
- Assisted in the design of robot-related parts such as locking units, battery packs, etc.
- Partook in maintaining, assembling, and disassembling robots.

RESEARCH AND PROJECTS

Industrial Exoskeleton*, Capstone Design Project* **Berkeley, CA**

Team Lead, Mechanical Design Engineer *September 2022 – Present*

Modified an existing design of suitX's BackX product, an active trunk-support exoskeleton for workers for heavy weightlifting

- Led the design of a one-actuator system to replace the current two-actuator system to reduce weight and cost.
- Worked with motors with built-in planetary gears and used the torque between the rotor and stator as two outputs.
- Applied SolidWorks to build complex parts for an assembly and applied GD&T in drawings for manufacturing.
- Leading prototyping, testing, and development of motor control with C++.

Exoskeleton, *Interdisciplinary Design Project* **Madison, WI**

Team Lead, Mechanical Design Engineer *September 2021 – December 2021*

Designed upper limb assist devices for SMA patients to help them perform everyday activities and weightlifting

- Led the review on previous research and patents by consulting related literature, articles, and online resources.
- Constructed a workable mechanical structure to develop a design specification that fully meets user needs.
- Led the design of a conceptual model using SolidWork, performed simulation with Opensim to check the feasibility of the overall design, and actualized prototyping.

Gearbox Design Project *January 2021 – April 2021,* **Madison, WI**

Designed a gearbox that can run more than 10^6 cycles from the perspective of material and force

- Utilized EES to perform force analysis on shafts, gear teeth, and bearings in gearboxes.
- Contributed to programming with EES and identified the optimal parameters of the remaining gears, shafts, and bearings based on dimensions of one of the gears and the motor by combining the results obtained in the force analysis with the programs written in EES.
- Applied SolidWorks to build a model, produced engineering drawings and wrote final project reports.

OTHER EXPERIENCE

***Intern, Customer Service Department,* MUJI**, Shanghai, China *June 2019 – August 2019*

***Teaching Assistant*, EF Education**, Shanghai, China *June 2018 – August 2018*

Participant, MinneHack & MadHacks *2018 – 2019*

SKILLS AND INTERESTS

Programming/Software: Python, MATLAB, EES (Engineering Equation Solver)

3D Modeling/Engineering Drawing: SolidWorks, PTC Creo, GD&T

Other Software: Microsoft Office, Corel VS, Arduino, LabView, Moldex 3D

Languages: Chinese Mandarin-Native Speaker, English-Fluent: TOEFL (110/120), GRE(327/340)

Lego building: Built numerous Lego kits, ranging from basic Lego brick stacking to Lego robotics, therefore became fascinated with various types of mechanical transmission.

Model building: Built numerous Gunpla models by BANDAI, gained experience in producing mirror surface finish and paint jobs.

Music: Extensive piano training since young age, self-taught drum and guitar, studied basic music theory in college; Amateur music producer with own musician page on NetEase Cloud Music with 8 published songs.