Caden Kraft

ckraft11@iastate.edu • (563) 340-5774 • cadenkraft.com

INTERNSHIPS

KONBINI TECHNOLOGIES **Singapore, SG**
Electro-Mechanical Engineer *Aug 2020 – Apr 2021*

- Developed an E-payment device capable of converting traditional coin-based washing machines
- Synthesized knowledge of mechanical design and electrical engineering to build a cost-effective device that still maintained toolless integration with older machines. Used Wi-Fi capable microcontrollers on the device to create a network of smart laundry machines at each location allowing customers to pay for their cycles with Singtel Dash, NETS Flashpay, or credit card
- Created over 10 FDM 3D printed prototypes and evaluated the E-payment device rigorously before it was manufactured and successfully deployed to over 200 machines in three different countries

MOTIONAL **Singapore, SG**
Mechanical Design Engineer *Jan 2020 – May 2020*

- Developed an autonomous testing vehicle capable of simulating pedestrian movement used for training autonomous vehicles
- Designed testing vehicle using SolidWorks and Ansys to perform finite element analysis on the custom suspension system and gearbox. The vehicle was evaluated to withstand 1.5 tons
- Produced professional renders and stress analysis charts that were presented to senior engineers to iterate on the final design architecture. Also created SLS and carbon infused FDM prototypes of complex components

EDUCATION

IOWA STATE UNIVERSITY **Ames, IA**
Mechanical Engineering Freshman *Aug 2021 – May 2025*
Clubs and Activities:

- PRISUM Solar Car – Structures and Electronics Teams
- MAVRIC M2I Mars Rover – Mechanical Team

SINGAPORE AMERICAN SCHOOL **Singapore, SG**
International High School *Aug 2017 – May 2021*

PROJECTS AND AWARDS

NASA INTERNATIONAL SPACE STATION EXPERIMENT **Singapore, SG**
Mechanical and Electrical Design Lead *Jul 2020 – Aug 2021*

- Lead a team of five people to develop a biological experiment capsule examining the development of brine shrimp in a micro gravity environment on the International Space Station
- Designed schematic and PCB in Altium Designer used for monitoring the experiment. Also completed the design of the final SLA printed launch capsule

INTERNATIONAL SPACE CHALLEGE **Singapore, SG**
Mechanical Design and Technical Imagery *Jul 2020 – Jan 2021*

- Received the AWS innovation award and was a top 10 finalist out of 141 projects in the International Space Challenge for developing a lunar excavation rover
- Created design of the rover using SolidWorks and validated the designs performance metrics using Ansys to simulate lunar conditions
- Collaborated with team members in writing a technical paper summarizing the research, design specifications, and renderings

RELEVANT SKILLS

- SolidWorks
- Ansys
- Autodesk Inventor
- Creo
- 3D Printing (FDM, SLA, SLS)
- Luxion Keyshot
- CATIA
- MATLAB
- Altium Designer