

# Kuber Motgi

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## Summary

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As a young engineer, I'm excited to make significant changes into engineering field with a goal to make machines functions safe, efficient, reliable and environmentally conscious. The most challenging endeavor in my experience, was to lead the Rover Robotics project with no prior experience organizing a hackathon competition within a highly critical deadline of 6 months.

## Work Experience

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### Mechanical Engineer I

Dec 2020 - Present

#### [Abbott Diabetes Care - Alameda, CA](#)

- Modified firing force of the applicators to fix retraction issues and performed Instron force testing to verify results
- Utilized Geomagic to transfer scan data into SolidWorks, and currently redesigning/rescaling parts to account for enlargement of new material into the current injection mold

### Mechanical Engineering Co-op

May 2019 - Feb 2020

#### [Ventec Life Systems - Bothell, WA](#)

- Designed (CAD) and built test fixtures, for medical device sub-assembly that featured: internal/external threading, O-ring compartment, variable sample chamber, tapered hole and O<sub>2</sub>/N<sub>2</sub> purge controlled by a LabVIEW interface
- Performed Stack tolerance analysis (GD&T) and referenced Apple O-ring guide for fixtures to be built by Protolabs
- Presented root cause analysis data from tests, brainstormed creative solutions and evaluated risks with hardware team
- Developed test procedures, built electro-mechanical equipment from design and utilized the instrument to verify new hardware changes for manufacturing while incorporating terminal relays and solenoid valves for automation
- Applied failure analysis on media beds, rotary valves and compressor to identify issues with preexisting components

### Senior Engineering Lead

November 2018 - June 2019

#### [Rover Robotics - University of Washington School of Mechanical Engineering; Bothell, WA](#)

- Designed, built and programmed a unique stair climbing rovers, partnering with interdisciplinary engineering students
- Exceptional machine design aptitude for part selection, sizing and placement of electro - mechanical parts
- Hands-on engineering exp with assembly and using CNC Lathe, Mill, Drill Press and Circular Saw for part fabrication
- Programmed a Raspberry Pi to control the PWMs for multiple moving mechanisms of the rovers using Python
- Implemented FEA and stress/dynamics analysis on the complex 22x16 inch rover assembly, which has >30 parts

### Study Abroad- Sustainable Energy in Japan

May 2018 - September 2018

#### [Ehime University of Mechanical Engineering - Matsuyama, Japan](#)

- Shown apt communication skills by corresponding with Japanese energy professionals, to discuss the energy policies and to further inspect the potential of clean energy for future use.
- Examined the potential of nuclear energy and communicated with Japanese representatives with regard to Nuclear energy policies in Japan and its impact on the country's economy.
- Demonstrated commercial skills by reasoning with energy officials on Japan's inclination towards hydrogen fuel/ fuel cell and submitted a 5-year proposal to the government to discuss their inclination towards a sustainable future

## Education

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### Bachelor of Science in Mechanical Engineering - *University of Washington*

Graduated August 2019

- Achieved Dean's List status for 2018-19 academic year while working 25-30 hours a week
- Mechanical Engineering Coursework | Mechanical System Design, 3D Modelling (CAD/CAM; Injection Mold), Machine Design, Material Science (Instron Force Testing - Tensile and Compression Testing; Heat Treating; Bonding and Material Selection) Electric Power and Machinery, Mechatronics (Arduino, LabView)

## Skills and Knowledge

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### Language

### Platforms/Certification:

SolidWorks (Ver 2018-2019), Geomagic Essentials, Python, MATLAB, Simulink, MakerBot, Cura, Java, C#, LabVIEW, MS Office, Autodesk Inventor, Apple O-Ring, Starett Guide