

# ZOE KONG

(416) 317-2110

[zoe.kong@edu.uwaterloo.ca](mailto:zoe.kong@edu.uwaterloo.ca)

[zoe-kong.github.io/ZK-portfolio/](https://zoe-kong.github.io/ZK-portfolio/)

## QUALIFICATION

- Industrial Type: Bio-medical, Nuclear, Additive Manufacturing
- Mechanical Skills: DFM, SolidWorks, GD&T, 3D printing, rapid prototyping

## EDUCATION

### University of Waterloo

*Mechanical Engineering with Management Science Option*

Waterloo, ON, Canada

*Sept 2015 – Jun 2020*

### Certified Associate of Project Management (CAPM®)

Aug 2019

## EXPERIENCE

### Laker Energy Products Ltd.

*Quality Engineering Co-op*

Oakville, ON, Canada

*Aug 2018 – Dec 2018*

- Slashed scrap rate by 20% through failure analysis and redesign of cutting fixture
- Reduced inspection time by 16% after reformulating quality examination procedures
- Performed time study on inspection procedure of nuclear workpieces to ensure consistent delivery

### SM Research Inc.

*Automation Design Co-op*

Toronto, ON, Canada

*Jan 2018 – Apr 2018*

- Optimized performance of cooling module by 170% with validation tests and heat transfer analysis
- Minimized vibrations on driving shaft of system through retrofitting of gear pulley system

*Automation Design Co-op*

*May 2017 – Aug 2017*

- Developed 6 concept designs for a pipetting system that can potentially lower the cost by 27%
- Finalized the industrial design of a compatible pipetting system with minimized machine footprint

*Mechanical Design Co-op*

*Sept 2016 – Dec 2016*

- Designed and prototyped a test-tube and container module to resolve chemical spilling issues
- Formulated manufacturing drawings for Automated DNA Extractor utilizing GD&T

## PROJECT

### Liquid Handling System

- Designed and assembled a cost-efficient pipetting workstation to replace massive pipetting
- Eliminated cross contamination between samples by having drop-prevention on pipetting tip
- Extended machine service life by increasing stability of workstation through strength analysis

### Arduino Maze Solver

- Designed and built a steward platform driven maze solver with six degree-of-freedom
- Reduced average solving time by 500% by using linear actuator instead of linkage system