# JOSHUA **HERNANDEZ**





# **SUMMARY**

Recent aerospace engineering graduate with a solid background in engineering problem analysis, strong written and verbal communication skills, excellent teamwork and organizational skills, willingness to learn, willingness to go the extra mile, accepts constructive feedback well, and excellent technical documentation skill.



# **EDUCATION**

Bachelor of Engineering in Aerospace | Ryerson University | Sept/2014 - Jun/2019



#### **SKILLS**

- Microsoft: Word, Excel, PowerPoint
- Communication
- Team player
- Time management

- Quick learner
- Technical documentation
- CATIA V5
- MATLAB



#### RELEVANT EXPERIENCE

# Composite Manufacturing Technician | Spartec Composites Inc. | Aug/2019 - Feb/2020

- Performed duties dedicated to lamination, trimming, grinding, drilling, and bonding of carbon fiber automotive components with the use of power and measurement tools.
- Developed the ability to read and interpret engineering drawings.
- Completed the setup for vacuum assisted resin transfer molding (VARTM) process of fiberglass defense parts.
- Learned basic instructions to operate a FANUC 6-axis robotic router for the final trimming of carbon fiber parts.
- Honed the ability to work under pressure by completing tasks while working around weekly order schedules.
- Cultivated 5S methodology in the workplace.

#### Propulsion Design Project (A+) | Course: Propulsion | Jan/2019 - Apr/2019

- Worked with two colleagues to design and select the optimal propulsion system for a vertical takeoff and landing (VTOL) unmanned aerial vehicle (UAV) with given aerodynamic and structural specifications.
- Studied the possibility of using internal combustion engines (ICE's) for a VTOL UAV.
- Researched, reviewed, and selected the optimal ICE.
- Performed air-standard engine analysis (Otto cycle) and requirement verification to check feasibility.
- Designed an axial turbine based on the selected turboshaft engine.
- Organized and formatted the overall technical report.

### Laminate Design Project Lead (A+) | Course: Composite Materials | Jan/2019 – Apr/2019

- Led a team composed of five members to design a composite laminate having comparable or better in-plane characteristics and lesser weight than a 7075-T6 aluminum plate.
- Delegated and scheduled objectives and tasks for all members to complete three phases of the project.
- Designed a unidirectional and symmetric composite laminate composed of selected carbon fiber and epoxy resin.
- Created the computational process using MATLAB to determine the in-plane characteristics and weight of the designed composite laminate.
- Completed hands-on training in manufacturing of composites which includes accepting material, cutting plies, lay-up, bagging, curing, inspection and trimming, and assembly.
- Organized and formatted the overall technical report.

# Capstone Project (A+) | Course: Aircraft Design Project | Jan/2018 - Apr/2018

- Competed and won against three groups to design the best hybrid-electric aircraft certifiable under FAA regulations (FAR 23 and FAR 135).
- Researched, reviewed, and selected the optimal gas generator for the aircraft.
- Created the gas generator MATLAB model that required user input (altitude, time increment, and power needed to supply the aircraft via gas generator), and outputted the fuel consumed and the minimum and maximum power it can provide based on input.
- Performed the miscellaneous drag analysis on the aircraft (nacelle, landing gear, single-slotted flap, and windshield drag).
- Organized and formatted the overall technical report.



# **ADDITIONAL EXPERIENCE**

Material Handler | American Eagle Outfitters Inc. | Aug/2018 – Dec/2018 Overnight Freight Team Associate | Home Depot | Jun/2017 – Aug/2017 Cook | Thai Express | Apr/2014 – Feb/2015

# Reference available upon request