Boyan (Tony) Zhou

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EDUCATION

Bachelor of Aerospace Engineering September 2016 – March 2021

Stream A: Aerodynamics, Propulsion and Vehicle Performance

Carleton University, Ottawa, Ontario

- Third Year Undergraduate, CGPA 10.07/12 (A-)
- 4-months Coop at International Pilot Academy
- Entrance scholarship, Second Year scholarship and Third Year scholarship

Master of Applied Science: Aerospace Engineering May 2021 – Present

Carleton University, Ottawa, Ontario

- Entrance scholarship
- Expected graduation in May 2023

Certifications

- CSPA Solo-skydiving License
- G-level driving License

Work Experience

Teaching Assistance September 2020 – December 2020

- Hosted two one-hour tutorial sessions weekly for MATH1004 and MATH1005
- Marked students' assignments weekly and uploaded the marks
- Answered students' questions during weekly office hour or on email
- Prepared weekly Microsoft slides for the tutorial sessions.

Flight Dispatcher April 2019 – March 2020

- Arranged weekly flight schedule for student pilots
- Developed new Adobe cloud-based paperless dispatched system
- Dispatched, monitored and checked-in each flight
- Issued accident/incident reports
- Inspected aircrafts' (Cessna C-172, Piper PA-38 and PA-31) conditions and scheduled the maintenance if needed.

Relevant Skills

Technical Skills

- Operated, repaired and upgraded the Creality Ender-3 and CR-10 FDM 3D Printer
- Tested and applied the advanced carbon fiber infilled 3D printing filament for manufacturing FPV drone airframe and canopy
- Designed the 3D models for 3D Printing purpose by using Onshape, CATIA and Fusion
- Accomplished CFD and FEA analysis by using ANSYS CFD and ADPL
- Succeeded in doing math modeling, calculation and dynamic analysis, simulation by using MATLAB

Communication Skills

- Given technical presentations and tutorials in English fluently
- Prepared presentation slides and animations by using Microsoft PowerPoint and Adobe Flash
- Established illustration diagramed by using Adobe Photoshop and Adobe Illustrator
- Collaborated with Ravens Airsoft team to attend multiple military simulation events in Ontario

Key Projects

Team Member September 2019 – April 2020
MAAE4907 FPV RPAS Capstone

- Designed and manufactured the FPV RPAS airframe and canopy by using FDM 3D printer
- Upgraded the 3D printer for advanced carbon-fiber filaments printing purpose
- Tested the compared the mechanical properties of carbon-fiber filaments made by different company
- Improved the airframe structure and the canopy design by doing topology and CFD analysis

Team Member
International Pilot Academy Paperless Dispatched System July 2019 – September 2019

- Created online dispatched sheet based on Adobe Acrobat
- Designed the students/employees card and the corresponding barcode scanning system
- Debugged and improved the procedures of using the new dispatch system

Team Member January 2019 – April 2019
MAAE3901 Mechanical and Aerospace lab

- Created the 3D model for a machine that can have linear motion on x and z axis and rotate on y axis
- Hand Crafted the designed machine powered by the battery and controlled manually

Team Leader September 2018 – December 2018
MAAE3004 Luger P08 Pistol toggle-lock mechanism analysis

- Simulated the position, velocity, acceleration and the force variation of the P08 pistol toggle-lock mechanism during the semi-auto reload process by using MATLAB SIMULINK
- Built and tested the toggle-lock mechanism dynamic mathematical model on MATLAB

Field Related Extra-Curricular Experience

Skydiving Experience June 2020 – Present

- Equipped 240 square inch modern sport parachute and accomplished 12 skydiving jumps at 13500 ft and 1 emergency exit jump at 5000 ft
- Presented the ability to recover from the unstable exit and doing 360-degree controlled turn during the free fall
- Experienced parachute malfunctioning when deploying the canopy twice
- Passed the exam and obtained the solo-skydiving license

Aero-photography Experience May 2020 – Present

- Operated the DJI Mavic Mini and DJI Mavic Air 2 for photography purpose and recon purpose during the military simulation event
- Learned and familiar with the current RAPS law and regulations in Canada

RECORD OF GRADES

Student Name: Boyan Zhou
Cumulative Grade Point Average: 10.12/12 (A-)
Graduation Date: 2020 April

Course Number	Course Name	Letter Grade
Year One:		
ESL 1900	Advanced English as a Second Language for Academic Purposes	A-
MATH 1004	Calculus for Engineering Students	A+
MATH 1104	Linear Algebra for Engineering Students	A+
MATH 1005	Differential Equations and Infinite Series for Engineering Students	A+
ECOR 1101	Mechanics I	A+
ECOR 1606	Problem Solving and Computers	A+
ECOR 1010	Introduction to Engineering	C
CHEM 1101	Chemistry for Engineers	A+
PHYS 1004	Electromagnetism & Wave Motion	A-
CHST 1002	Childhood in Canadian Context	A-
Year Two:		
CCDP 2100	Communication Skills for Engineering Students	A-
ECOR 2606	Numerical Methods	A
MATH 2004	Multivariable Calculus for Engineering students	A
MATH 3705	Mathematical Methods	A+
MAAE 2400	Thermodynamics & Heat Transfer	A+
MAAE 2300	Fluid Mechanics I	A
MAAE 2001	Engineering Graphical Design	A-
MAAE 2101	Engineering Dynamics	A
MAAE 2700	Engineering Materials	B+
MAAE 2202	Mechanics of Solids I	B+
PHYS 2004	Modern Physics for Engineers	A-
Year Three:		
AERO 3700	Aerospace Materials	B+
ELEC 3605	Electrical Engineering	A+
MAAE 3004	Dynamics of Machinery	B+
MAAE 3202	Mechanics of Solids II	A-
SYSC 3600	Systems and Simulation	A+
AERO 3002	Aerospace Design and Practice	A-
MAAE 3300	Fluid Mechanics II	B+
MAAE 3400	Applied Thermodynamics	C
PHIL 1200	The Meaning of Life	B-
MAAE 3901	Mechanical & Aerospace Engineering lab	B
STAT 3502	Probability and Statistics	A-
Year Four:		
MAAE 4907	Engineering Design Project (Capstone Project)	A
AERO 4608	Composite Materials	A-
AERO 4308	Aircraft Stability & Control	A+
AERO 4304	Computational Fluid Dynamic	A+
AERO 4003	Aerospace Systems Design	C+
MAAE 3500	Feedback Control System	A-
ECOR 3800	Engineering Economics	A+
ECOR 4995	Professional Practice	B-
AERO 4302	Aerodynamic & Heat Transfer	B
AERO 4306	Aircraft Vehicle Performance	A-
MAAE 4604	Finite Element Methods	SAT