Boyan (Tony) Zhou

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EDUCATION

Bachelor of Aerospace Engineering with distinction   September 2016 – March 2021

Stream A: Aerodynamics, Propulsion and Vehicle Performance

Carleton University, Ottawa, Ontario
- Grade Point Average 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

- RPAS Pilot Certificate - Advanced Operation
- CSPA Solo-skydiving License
- G-level driving License

Work Experience

Teaching Assistance   September 2020 – Present

- Hosted weekly tutorial sessions
- Evaluated students' assignments and uploaded the marks
- Responded to students' requests and questions

Flight Dispatcher   April 2019 – March 2020

- Arranged weekly flight schedule
- Dispatched, monitored and checked-in each flight
- Issued accident/incident reports
- Checked aircrafts' (Cessna C-172, Piper PA-38 and PA-31) conditions then scheduled the maintenance if needed.

Vehicle Delivery Driver   February 2021 – September 2021

- Delivered vehicles between Ottawa, Toronto, and Montreal
- Proficient in many types of vehicles driving

McDonald's Crew Member   October 2021 – Present

- Prepared and cooked food in the back kitchen
- General help

Relevant Skills

- Operated, repaired, and upgraded the Creality Ender-3 FDM 3D printer and Elegoo Mars Pro DLP UV-resin 3D printer
- 3D modeling primarily by Onshape and Fusion 360
- Improved the 3D model design for FDM and DLP printing purposes and post-processed the printed objects
- Kinematic analysis and design by Adams and Matlab Simulink
- CFD and FEA analysis by ANSYS CFD, ADPL and Fusion 360
- Math modeling, calculation and simulation by MATLAB
- Arduino and relevant sensors' programming

Key Projects

Graduate Research Project: Flapping Wing Micro MAV   May 2021 – Present

- Analyzed the existing flapping mechanism and designed new flapping mechanism by ADAMS
- Designed the 3D model by Fusion 360 and Onshape
- Manufactured flapping wing prototype using both FDM and DLP 3D printers
- Programmed the Arduino sensors for wing position detecting

MAAE4907 FPV RPAS Capstone   September 2019 – April 2020

- Designed and manufactured the FPV RPAS airframe and canopy by a FDM 3D printer with CF-reinforced materials
- Modified the 3D printer for advanced carbon-fiber filaments printing purpose
- Tested the compared the mechanical properties of different carbon-fiber filaments
- Improved the airframe structure and the canopy design by doing topology on Fusion 360 and CFD on ANSYS

International Pilot Academy Paperless Dispatched System   August 2019 – September 2019

- Created online dispatched sheet based on Adobe Acrobat
- Designed and made the ID card and the barcode scanning system for student pilots and flight instructors
- Debugged and improved the new dispatch procedure

Field Related Extra-Curricular Experience

Aircraft spotting and Aero-photography

- Accumulated 173 km, 169 flights and around 20 hours flight time on DJI Mavic Mini and DJI Mavic Air 2S for photography purpose
- Run an aircraft spotting Instagram account (@tony.jetspotting) with around 500 followers

Skydiving

- 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 360-degree controlled turn during the free fall
- Experienced parachute malfunctioning when deploying the canopy multiply times

RECORD OF GRADES

Student Name: Boyan Zhou
Undergraduate Grade Point Average: 10.12/12 (A-)
Undergraduate Grade Point Average: 11.67/12 (A)

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
Graduate level:		

MAAJ 5308	Aerospace Alloys	A+
MECH 5802	Grad Eng Communications	B+
MECH 5803	Additive Manufacturing	A+
MECH 5805	Uninhabited Aircraft Systems	A
MECH 5602	Failure Prevention	Current
MECH 5806	Solar Energy	Current