

# Alex HONG

Nationality: China Gender: Male Date of Birth: Feb. 24, 1997

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## **Education Background:**

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### **09/2019 – 01/2021 University of Waterloo, Canada**

- Degree: Master of Engineering in Mechanical and Mechatronic Engineering
- Course: Algorithm Design and Analysis, Machine Control and Process, Pattern Recognition, Applied Economics for Management.

### **09/2015 - 06/2019 Zhejiang University (ZJU), China**

- Degree: Bachelor of Engineering in Architecture and Ocean Engineering
- Core Courses: Fundamentals of Computer Science , Calculus II, Ordinary Differential Equations , C Programming , University Physics (A) I, Ship Electrical and Communication , Ship Vibration, Fluid Dynamic

### **01/2017 - 06/2017 University of Gothenborg, Sweden**

- Exchange student for one semester. Course : Differential Geometry(G)

## **Work Experience:**

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### **08/2018-10/2019 Teaching Assistant, Remote, McGill University, Canada**

- Assistance of courses in Desautels Faculty of Management at McGill University
- Field : Statistic

### **10/2018-01/2019 Internship in Bosch, Hangzhou, China:**

- Logistic management: Using SAP for the daily delivery and backlog feedback.
- Product quality check under the instruction of the engineer

### **07/2017-08/2017 Internship in China State Shipbuilding Corporation, Wuxi, China**

- Internship in the ship structure and procedure of the ship manufacturing.

### **08/2017 Freelance writer of the Lonely Planet magazine and New Weekly magazine**

## **Research Experience:**

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### **07/2018- 09/2018 Northern Hemisphere Summer Research Scholarship Program, University of Auckland, Auckland, New Zealand**

- Completed the project of *Web-based Digital Twins for MTConnect/OPC UA-enabled Cyber-Physical Machine Tools* in the Laboratory for Industry 4.0 Smart Manufacturing Systems (LISMS) under the supervision of Prof. Xun Xu (<http://www.engineering.auckland.ac.nz/people/xun-xu>)
- Results: Achieved the aim of building a web-based virtual machine tool, monitoring the machine tool's status and machining processes through web browsers.
- Conference paper of **DEVELOPMENT OF MACHINE TOOL DIGITAL TWIN AND ITS APPLICATIONS**, published on CIE 48 Meeting, 2-5 December 2018 (Second author)

### **03/2017-05/2018 A Soft Control Valve Imitated From A Biological Heart Valve, Zhejiang University, China**

- It was a 3-member SRTP project proposed a software control valve constructed with a soft material to realize the active control of water pressure and flow through a biomimetic mammalian heart valve.
- I was in charge of the 3D Printing part and connection of the soft valve with the high voltage dielectric module.

## **Prizes & Honors:**

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### **12/2016 Third-Class Scholarship for Outstanding Merits in Academic Year 2015/2016**

### **07/2018 Scholarship of Summer Summer Research Scholarship Program, The University of Auckland**

## **Skills:**

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AutoCAD Matlab Python SQL

## **English Proficiency:**

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**08/2018 IELTS (Academic): 7.0** (Listening: 7.5, Reading 7.5, Writing 6.5, Speaking 7.0)

**10/2018 GRE: 324** (Verbal 155, Quantitative 169)