

# TZU-YUN (ARIEL) SHANN

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🌐 [lasirenashann.github.io](https://github.com/lasirenashann)

## Education

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**University of British Columbia, Vancouver BC, Canada** Sep 2018 - Present

M.Sc. in Computer Science

Advisor: Leonid Sigal

- Reinforcement learning and computer vision
- GPA: 92.8%

**National Tsing Hua University, Hsinchu, Taiwan** Sep 2014 - Jun 2017

B.S. in Computer Science

- GPA: 3.96/4.30 (overall), 4.17/4.30 (last 60 credits)

**Technical University of Munich, Munich, Germany** Summer 2015

- Summer school in Engineering and Geodesy

**National Chung Hsing University, Taichung, Taiwan** Sep 2013 - Jun 2014

Computer Science and Engineering

- GPA: 3.82/4.00 (Ranked 1<sup>st</sup> out of 34 students)
- Transferred to National Tsing Hua University in September 2014

## Publication

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### **Adversarial Exploration Strategy for Self-Supervised Imitation Learning** [\[pdf\]](#)

Z.-W. Hong, T.-J. Fu, **T.-Y. Shann**, Y.-H. Chang, C.-Y. Lee. In Proceedings of the Conference on Robot Learning (**CoRL**) 2019. ([Oral presentation](#))

### **Diversity-Driven Exploration Strategy for Deep Reinforcement Learning** [\[pdf\]](#)

Z.-W. Hong, **T.-Y. Shann**, S.-Y. Su, Y.-H. Chang, T.-J. Fu, C.-Y. Lee. In Advances in Neural Information Processing Systems (**NeurIPS**), 2018.

(A shorter version of this paper has been accepted in ICLR 2018 Workshop [\[pdf\]](#))

### **A Deep Policy Inference Q-Network for Multi-Agent Systems** [\[pdf\]](#) [\[code\]](#)

**T.-Y. Shann**<sup>\*</sup>, S.-Y. Su<sup>\*</sup>, Z.-W. Hong<sup>\*</sup>, Y.-H. Chang, C.-Y. Lee. In Proceedings of the International Conference on Autonomous Agents and Multi-Agent Systems (**AAMAS**), 2018.

(\* indicates equal contributions)

### **Virtual-to-Real: Learning to Control in Visual Semantic Segmentation** [\[pdf\]](#) [\[video\]](#)

Z.-W. Hong, Y.-M. Chen, H.-K. Yang, S.-Y. Su, **T.-Y. Shann**, Y.-H. Chang, B. H.-L. Ho, C.-C. Tu, T.-C. Hsiao, H.-W. Hsiao, S.-P. Lai, Y.-C. Chang, C.-Y. Lee. In Proceedings of the International Joint Conference on Artificial Intelligence (**IJCAI**), 2018.

## Experience

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### Graduate Teaching Assistant

Sep 2018 - Present

*Department of Computer Science, University of British Columbia, Vancouver*

- CPSC425 Computer Vision (Fall 2018, Spring 2018)
- CPSC322 Introduction to Artificial Intelligence (Fall 2019)

As a TA, my work includes (but not limited to) holding weekly office hours, resolving students' questions on Piazza, grading and exam invigilation.

### Teaching Assistant for Mila/IVADO Deep Learning School

Dec 2-6 2019

*Data Science Institute, University of British Columbia, Vancouver*

- Help students with PyTorch and deep learning models (such as CNNs, RNNs) during daily tutorials.

### Research Assistant

Jan 2017 - Aug 2018

*ELSA Lab, National Tsing Hua University, Hsinchu, Taiwan*

Advisor: Chun-Yi Lee

- Proposed an algorithm for multi-agent reinforcement learning.
- Proposed methods to improve exploration in reinforcement learning.
- Worked on virtual-to-real transfer of vision-based robotic control.

### Software Engineer Intern

Jul 2016 - Sep 2016

*Multimedia Department, MediaTek HQ, Hsinchu, Taiwan*

- Developed product testing and verification tools using C#/C++.
- Conducted performance analysis.

## Professional Activities

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- **Conference Reviewer:** NeurIPS 2019, ICML 2020

## Awards & Honours

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**International Tuition Award**, *University of British Columbia*, 2018, 2019

**Student Volunteer**, *32nd Conference on Neural Information Processing Systems*, 2018

**Academic Achievement Award**, *National Tsing Hua University*, 2017  
*Awarded to top 5% students in Department of Computer Science*

**Academic Achievement Award**, *National Chung Hsing University*, 2014  
*Awarded to top 5% students in Department of Computer Science and Engineering*

## Skills

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<b>Programming languages</b>	Python, C/C++, Matlab, Java
<b>Deep learning frameworks</b>	PyTorch, Tensorflow, Keras
<b>Tools</b>	Git, Vim, Latex
<b>Human Languages</b>	Mandarin (Native), English (IELTS 8.0, GRE 330), German (A2-B1), Spanish (Entry)

## Relevant Courseworks

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CPSC 532M	Introduction to Machine Learning and Data Mining	89 / A
CPSC 535P	Digital Humans	91 / A+
CPSC 503	Computational Linguistics	90 / A+
CPSC 532S	Multimodal Learning with Vision, Language and Sound	100 / A+
CPSC 540	Machine Learning	94 / A+