

# ZAHEEN FARRAZ AHMAD

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# CURRICULUM VITAE

## Education

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<b>PhD in Computing Science</b> , University of Alberta	2017 – 2025
Thesis: “ <i>Strengthening Integration Between Learning and Search For Planning</i> ”	
Advisors: Michael Bowling, Levi H.S. Lelis	
<b>MSc in Computing Science</b> , University of Alberta	2013 – 2017
Thesis: “ <i>Action Selection for Hammer Shots in Curling: Optimization of Non-convex Continuous Actions With Stochastic Action Outcomes</i> ”	
Advisor: Robert C. Holte	
<b>BScEngg in Computer Science and Engineering</b> , Islamic University of Technology	2008 – 2012
Graduated with Honors, GPA: 3.98/4.00	

## Work Experience

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<b>Postdoctoral Scholar</b> , University of Alberta	2025 – Present
<b>Graduate Research Assistant</b> , University of Alberta	2019 – 2021
<b>Machine Learning Consultant</b> , AB Sciex Pte. Ltd.	2017 – 2018
<b>Lecturer</b> , Islamic University of Technology	2012 – 2013

## Teaching Experience

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<b>Teaching Assistant</b> , University of Alberta	2013 – 2020
Courses:	
· CMPUT 101: Introduction to Computing	
· CMPUT 175: Introduction to the Foundations of Computation II	

## Awards and Scholarships

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- Graduate Research Assistant Fellowship, 2021 – 2025
- Graduate Student Teaching Award, 2018
- IUT Gold Medal Award, 2012
- IUT Scholarship, 2009 – 2012

## Academic Services

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### Program Committee:

- 2026: ICLR
- 2025: TMLR, ICLR, ICML

- 2024: ICLR, ICML, NeurIPS (top 10%)
- 2023: AAAI, ICML, NeurIPS
- 2022: AAAI, NeurIPS

**Vice-President**, Computing Science Graduate Student Association, University of Alberta, 2015

**Treasurer**, IUT Computing Society, Islamic University of Technology, 2012

**Organizer**, National ICT Fest, Islamic University of Technology, 2012

## **Outreach**

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**Presenter**, Iverson Day, 2014 – 2019

**Panelist**, WP Wagner Panel, 2015

## **Talks**

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- “Strengthening Integration Between Learning and Search for Planning” — Thesis Seminar, *University of Alberta*, Edmonton, Canada (2025)
- “Generating Approximate Solutions for Submodular Set Function Maximization Problems” — Graduate Student Seminar, *University of Alberta*, Edmonton, Canada (2025)
- “Marginal Utilities for Planning in Continuous or Large, Discrete Action Spaces”, *University of Regina*, Regina, Canada (2023)
- “Marginal Utilities for Planning in Continuous or Large, Discrete Action Spaces” — Amii AI Seminar, *University of Alberta*, Edmonton, Canada (2021)
- “Action Selection for Hammer Shots in Curling” — Conference talk, *IJCAI*, New York, USA (2016)
- “AI Analytics for the Sport of Curling” — Amii AI Seminar, *University of Alberta*, Edmonton, Canada (2016)

## **Publications**

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### **Journal Publications**

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Milson, N., Tashchilina, A., Ooi, T., Czarnecka, A., Ahmad, Z. F., & LeBlanc, L. J. (2023). High-dimensional reinforcement learning for optimization and control of ultracold quantum gases. *Machine Learning: Science and Technology*, 4(4), 045057.

Durksen, T. L., Chu, M.-W., Ahmad, Z. F., Radil, A. I., & Daniels, L. M. (2016). Motivation in a MOOC: A probabilistic analysis of online learners' basic psychological needs. *Social Psychology of Education*, 19, 241–260.

### **Conference Publications**

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Sokota, S., Ho, C. Y., Ahmad, Z. F., & Kolter, J. Z. (2021). Monte carlo tree search with iteratively refining state abstractions. *Advances in Neural Information Processing Systems*, 34, 18698–18709.

Ahmad, Z. F., Lelis, L., & Bowling, M. (2020). Marginal utility for planning in continuous or large discrete action spaces. *Advances in Neural Information Processing Systems*, 33, 1937–1946.

Ahmad, Z. F., Holte, R. C., & Bowling, M. (2016). Action Selection for Hammer Shots in Curling. *International Joint Conference on Artificial Intelligence*, 561–567.

### **Workshop Publications**

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Ahmad, Z. F., Sturtevant, N., & Bowling, M. (2021). Measuring the Solution Strength of Learning Agents in Adversarial Perfect Information Games. *Association for the Advancement of Artificial Intelligence*.

### **Other Publications**

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Ahmad, Z. F. (2025). *Strengthening integration between learning and search for planning* [Doctoral dissertation, University of Alberta].

Milson, N., Tashchilina, A., Ooi, T., Czarnecka, A., Ahmad, Z. F., & LeBlanc, L. J. (2024). Reinforcement learning control of atom cooling. *Bulletin of the American Physical Society*.

Ahmad, Z. F. (2017). *Action selection for hammer shots in curling: Optimization of non-convex continuous actions with stochastic action outcomes* [Master's thesis, University of Alberta].