Justin Stevens

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Education

Washington University in St. Louis	**St. Louis, Missouri**
PhD in Computational and Data Sciences	*August 2025-Current*

First Research Rotation: Dr. Will Yeoh and Dr. Dennis Barbour

University of Alberta	**Edmonton, AB**
M.Sc. in Computing Science	*September 2021-August 2023*

Thesis supervised by Dr. Vadim Bulitko was nominated for the department's best thesis award.

University of Alberta	**Edmonton, AB**
B.Sc. in Mathematics & Computing Science	*January 2018-June 2021*

Graduated with distinction. On Dean's Honor Roll in science 2018-2021. Undergraduate Academic Scholarship.

Harvey Mudd College	**Claremont, CA**
Transferred after first year	*August 2016-May 2017*

Machine Learning Experiences

Art of Problem Solving	**San Diego**
Machine Learning Engineer	*April 2025-Current*

- Worked on assessing AI tutoring bots for students to use in our classes to get instant homework help.
- Developing a machine learning model to predict student learning for Beast Academy Online.
- Delivered three company wide presentations on prompt engineering, AI Fluency, and data analysis.

Alberta Machine Intelligence Institute	**Edmonton, AB**
Machine Learning Educator	*September 2023-February 2025*

- Led the development of the "AI Everywhere" course at the University of Alberta to teach artificial intelligence to post-secondary students from diverse backgrounds.
- Led the development of the "Machine Learning Foundations for Executives" course to introduce artificial intelligence to C-Suite executives. Over 100 participants across Canada have attended this.
- Supervised 15 graduate students to develop artificial intelligence content and advise them on the best way to teach technical topics in an understandable way to non-technical audiences.
- Presented 28 deliveries of foundational machine learning content to diverse groups from industry.

Additional Skills

Fluent in the following: Python, C, C++, LaTeX, MatLab, Java, SQL

Publications

Conference

- **Justin Stevens**, Duncan Wilson, Richard Kelley. The Maximum Number of Sets for 12 Cards is 14. In *Proceedings of the IEEE Conference on Games*. Pages 1-8. 2025. *Acceptance Rate:* 35.1%
- Vadim Bulitko, Shuwei Wang, **Justin Stevens**, Levi H. S. Lelis. Portability and Explainability of Synthesized Formula-based Heuristics. In *Symposium on Combinatorial Search*. Vol. 15. 2022. *Acceptance Rate:* 39.2%

Other..

- Marion Neumann, Stephanie Rosenthal, **Justin Stevens**, Rachel Lugo, William Agnew, and Shira Wein. EAAI-24 Blue Sky Ideas in Artificial Intelligence Education from the AAAI/ACM SIGAI New and Future AI Educator Program. In *AI Matters*. Vol. 10, no. 4. 2025.
- **Justin Stevens**, Olympiad Number Theory through Challenging Problems. Self Published.

Additional Training and Awards

- AI-ACCESS NRT Fellowship valued at **$68,000 USD**: August 2025 for two years
- AAAI/ACM SIGAI New and Future AI Educator Award for **$1,600 USD**: February 2024
- Alberta Innovates Graduate Student Scholarship for **$26,000 CAD**: August 2022-August 2023
- NSERC CGS-M Scholarship for **$17,500 CAD**: August 2021-August 2022
- AI and Games Summer School, June 2023 in Cambridge, UK at Microsoft Research
- Deep Learning + Reinforcement Learning Summer School, July 2023 in Montreal at MILA

Conference Organization

- AIIDE 2025: Sponsorship Co-Chair
- Reinforcement Learning Conference 2025: RL for Video Games Workshop Program Committee
- AAAI 2025: Collaborative AI and Modelling of Humans Bridge Program Co-Organizer
- Upper Bound 2024: Co-Organizer of AI Governance and AI in Games Track
- AAAI 2024: Birds of a Feather Session: Co-Organizer of AI Literacy and CS in the Age of AI
- AIIDE 2023 Program Committee (Best Reviewer Nominee).
- Conference on Games 2023 Program Committee.

Invited Talks

- AI Seminar Series 2025: Intelligent Tutoring Systems for Math, CS, and Games: Presented on my research plan for my PhD on AI for education at the University of Alberta's AI seminar.
- Machine Learning Foundations (Part 1, Part 2): Presented on foundational machine learning material on behalf of Amii at the AI in Medical Systems Society annual symposium in 2022.
- How to win two-player games (Insights from the number theory that powered Deep Blue): Presented on the theoretical ideas and strategies for winning combinatorial games using techniques from search, game theory, and number theory to AlphaStar Academy Summer Math Camp 2020.
- Gradient Descent Towards Neural Networks: As part of the Undergraduate AI Society, delivered a presentation to a university-wide audience on creating a digit recognizer using TensorFlow.

Teaching Experiences

Art of Problem Solving   **Online**
Instructor, Teaching Assistant, Grader   *November 2017-August 2024*
Working part-time in a state-of-the-art online virtual math classroom for gifted students in grades 5-12.
- Lead instructor for math courses with around 35 to 50 students each on topics beyond traditional schoolwork. I've taught MATHCOUNTS Advanced, AMC 10 Final Fives, Intermediate Number Theory, Intermediate Algebra, Introduction to Counting & Probability, Group Theory, and Introduction to Algebra B.
- Created a MathJam for students to learn about an area of mathematics outside of their normal coursework, solving two-player games using number theory, attended by around 400 students worldwide.

University of Alberta   **CMPUT 366**

Teaching Assistant   *Winter 2021, Fall 2022, Winter 2023*

CMPUT 366 is the Search and Planning in AI course, and previously was the Intelligent Systems course.
- Led lab sections, created the majority of the quiz questions, and graded student assignments for the Intelligent Systems & Search and Planning in AI courses at the University of Alberta.
- Developed an assignment that over 250 students used, comparing the use of a minimax solver to a version augmented with alpha beta pruning for solving endgame puzzles in Connect 4.

Additional Experiences

Computing Science Graduate Student's Association   **University of Alberta**

VP External Relations & Partnerships   *May 2022-April 2023*

Worked with external organizations to raise money and host joint events for computing science graduate students to help the students expand their network and learn about opportunities in industry.
- Raised over $10,000 in sponsorships to host events, such as mental health workshops, a diversity potluck, intramural sports, board games night, and an art night.
- Organized a welcome night event by leading a team of volunteers to introduce approximately 140 new graduate students to the department and Edmonton's vibrant technology scene.

AlphaStar and CyberMath Academy   **SF Bay Area and Harvard**

Instructor and Program Coordinator   *Summer 2015-2019, Fall 2017, 2020, 2021*

Taught math classes and created curriculum for two educational math startup companies.
- Created the curriculum for a startup educational company that provides math lessons in algebra, combinatorics, number theory, and trigonometry to high-achieving pre-collegiate students.
- Led a group of eight math instructors for two and three-week summer camps at Harvard and Stanford to organize and teach classes worldwide to around 150 middle and high school students.
- Developed and instructed the curriculum for a brand new course, 'Number Theory with Python Programming', which taught students how to combine their skills in mathematics and coding together.

Technology Alberta   **University of Alberta**

Lead Volunteer for AI Seminar   *May 2021-May 2023*

Worked with Technology Alberta and Amii to showcase a local Alberta company monthly at the AI seminar.
- Collaborated directly with speakers to invite them to speak, advise them on the best topics to speak about, and to coordinate logistics for the talks.
- Hosted speakers from over a dozen companies, including Areto Labs, DarkHorse Analytics, DevFacto, LoKnow, SamDesk, BioWare, Intuit, Nanostics, and Trust Science.

Undergraduate Artificial Intelligence Society   **University of Alberta**

Founder, President   *October 2018–April 2021*

Organized and created a new student group on campus to facilitate undergraduate students interested in artificial intelligence to integrate with professors and members from industry.
- Hosted workshops using Open AI's gym to teach students how to apply reinforcement learning algorithms.
- Organized a speaker series with notable professors including Jonathan Schaeffer and Michael Bowling.

Robotics Lab Researcher   **University of Nevada, Reno**

Under Dr. Richard Kelley   *March 2015–August 2016*

Worked in a robotics research lab while in high school and learned the basics of AI/machine learning.
- Worked on controlling a PR2 robot using a virtual reality headset, deep learning, and ROS.
- Through STEMBOPS, a UNR project supported by NSF, developed a video titled "Controlling a Robot with Virtual Reality" and a white paper to encourage local students to become interested in STEM fields.

Extra
- **Volunteer Work:** Mental Health Foundation in Canada
- **My YouTube with Educational Math Videos:** Number Theory Guy
- **Games playtested (listed in credits):** Sharks and Minnows; Little Learning Machines