BRYAN MCKENNEY

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EDUCATION

University of New Hampshire - Durham, NH

Master of Science: Computer Science **Expected: May 2024**

- Current GPA: 3.94
- Thesis on developing strong AI for the card game *Duelyst II* by using machine learning techniques such as learning from data and RL from self-play; advisors Wheeler Ruml and Alexander Dockhorn (Leibniz Universität Hannover)
- Relevant classes: Advanced Machine Learning (Marek Petrik), Planning for Robots (Wheeler Ruml)

Bachelor of Science: Computer Science | Minor: Philosophy **May 2023**

- Honors in Major & Interdisciplinary Honors (GPA: 3.99)
- Thesis: "General-Purpose Planning Algorithms in Partially-Observable Stochastic Games"; advisor Wheeler Ruml
- Link to thesis: scholars.unh.edu/honors/773
- Relevant classes: Intro to AI (Wheeler Ruml), Intro to ML (Marek Petrik), Intro to RL (Marek Petrik), Intro to NLP (Samuel Carton)

PUBLICATIONS

Bryan McKenney and Wheeler Ruml, General-Purpose Planning Algorithms in the Card Game *Duelyst II*, *Proceedings of the IEEE Conference on Games (CoG-23)*, 2023.

- Show that simple general-purpose planning algorithms beat the existing specialized game-playing AI in the online collectible card game *Duelyst II*
- Link to paper: cs.unh.edu/~ruml/papers/duelyst-cog-23.pdf

Bryan McKenney and Wheeler Ruml, Goal-driven Autonomy Without GDA, *Proceedings of the AAAI-23 Bridge Session on Artificial Intelligence and Robotics*, 2023.

- Show that a simple planner can perform just as well as the complex goal-driven autonomy architecture in a Navy-themed online open-world game
- Link to paper: cs.unh.edu/~ruml/papers/no-gda-aaai-bridge-2023.pdf

RESEARCH & DEVELOPMENT EXPERIENCE

UNH Summer Undergraduate Research Fellowship (SURF) Program **May – August, 2022**

- Implemented hindsight optimization for a Navy-themed domain with an unknown number of invisible adversaries; advisor Wheeler Ruml

UNH Research Experience and Apprenticeship Program (REAP) **May – August, 2020**

- Developed algorithm for the Physical Traveling Salesman Problem working with another Honors CS student; advisor Wheeler Ruml

Game Development **2016 – Present**

- Developed better AI and designed 3 boss battles for *Duelyst II* as member of Dream Sloth Games team
- Developed and published 6 video games (3 on Google Play Store, 2 on itch.io, 1 on GitLab Pages)
- Developed and published 2 card games (on The Game Crafter)

SCHOLARSHIPS & AWARDS

UNH Computer Science Department Full Tuition Scholarship — **August 2023**

IEEE CIS Conference Travel Grant — **July 2023**

AAAI Student Scholarship and Volunteer Program — **December 2022**

UNH Glenice Dearborn Scholarship — **May 2021, May 2022**

UNH John H. Smith Scholarship — **May 2020**

Langdon J. Plumer Outstanding Student Award for Computer Science — **May 2019**
- Awarded by the Seacoast School of Technology

Liberty Mutual Scholarship — **May 2019**

Newmarket Teachers' Association Scholarship — **May 2019**

People to People International Joyce C. Hall College Scholarship — **May 2019**

UNH Whelen Industry Scholarship — **April 2019**

UNH Presidential Scholarship — **January 2019**

SOCIETIES & CLUBS

Upsilon Pi Epsilon — **May 2022 – Present**
- International honor society for the computing and information disciplines

National Technical Honor Society — **May 2019 – Present**

Socratic Society — **August 2021 – May 2022**
- Debated philosophical issues

Meeple Tabletop Gaming Syndicate — **August 2019 – May 2022**

Cybersecurity Club — **August 2019 – May 2020**

Idea & Innovation Society — **August 2019 – May 2020**

VOLUNTEERING

AAAI - Washington, DC — **February 2023**
- Helped the Underline team and session chairs with miscellaneous tasks

UNH EcoReps - Hampton Beach, NH — **October 2021**
- Participated in a cleanup of Hampton Beach

Gather Food Pantry - Portsmouth, NH — **August 2021**
- Helped run the Meals 4 Kids mobile market