

Kevin A. Wang

www.github.com/VitamintK
www.kevinwang.us

Education

(Future) PhD Student at Brown University

Fall 2023 - ???

Will start PhD studies in Fall 2023 with Professor Amy Greenwald

University of California, Irvine - BS in Computer Science

2014 - June 2018

GPA: 3.5

Relevant Courses: Approximation Algorithms, Graph Algorithms, Computational Geometry, Statistical NLP, Deep Learning, Cryptography/Security, Optimization, Digital Image Processing

Research Interests

Broadly, I'm interested in machine learning and game theory, and their intersection. Specifically, I'm interested in computational game theory, multi-agent reinforcement learning, and the pursuit of solving large, partially-observable games, both theoretically and practically.

Publications

[XDO](#): A Double Oracle Algorithm for Extensive-Form Games.

2021

In Conference on Neural Information Processing Systems (NeurIPS 2021).

Stephen McAleer, John Lanier, **Kevin A. Wang**, Pierre Baldi, Roy Fox.

Anytime Optimal PSRO for Two-Player Zero-Sum Games

2022

To appear in AAAI-22 Workshop on Reinforcement Learning in Games (AAAI-RLG 2022)

Stephen McAleer, **Kevin A. Wang**, Marc Lanctot, John Lanier, Pierre Baldi, Roy Fox

Research and Industry Experience

Meta AI (FAIR) - AI Resident

July 2022 - July 2023

Working with Noam Brown and Anton Bakhtin on projects in computational game theory.

UC Irvine - [Visiting Researcher](#)

Mar 2021 - 2022

Worked with Professor Roy Fox and others to research novel methods to approximate Nash equilibria in zero-sum, 2-player, imperfect-information games, including depth-limited search.

NeurIPS 2021 Competition: Reconnaissance Blind Chess AI

4th place in the contest. (Was tied for 2nd place but due to a technical mishap, ended up with 4th.) Invited to give a talk about my bot at the RBC workshop at **NeurIPS 2021**.

Shift - Software Engineer

Aug 2018 - Dec 2020

Shift is an online car marketplace startup. I built and maintained the test-drive scheduling system using a constraint programming solver. I also did full-stack web development for the website with Golang, Typescript, and React. This work contributed to the company going public in 2020 at a \$700+ million valuation.

Square - Software Engineering Intern

Summer 2017

Wrote a full-stack customer-facing Ruby on Rails project for the *Caviar* food delivery service. Projects that I wrote and owned are in production, used by 1000s of restaurant clients.

Fellowships

CSGrad4US - NSF Fellowship

begins 2023

[NSF fellowship](#) for CS graduate school applicants with \$34,000 annual stipend and \$12,000 annual cost-of-education allowance for 3 years. One of 35 students selected nationally in 2021.

Open Source Contributions

DeepMind's [OpenSpiel](#)

Jan 2021 - Present

[Submitted](#) pull requests; [reviewed](#) pull requests; found bugs, [filed issues](#), and contributed to discussions.

EleutherAI's [Language Model Evaluation Harness](#)

Jan 2021

[Implemented](#) tasks used to evaluate generative natural language models. Used by Microsoft and Nvidia to evaluate their large language model "[Megatron-Turing](#)".

Recreational and Competitive Programming

Algorithmic Programming Competitions

2014-present

- ACM ICPC (International Collegiate Programming Contest) SoCal regional 2017: **3rd** place out of 105 teams (beating UCLA, Cal Tech, Harvey Mudd)
- IEEEExtreme 2017: **2nd** place out of all **US** teams; **23rd** place **overall** out of 2,121 teams
- IEEEExtreme 2016: **1st** place out of all **US** teams; **59th** place **overall** out of 2,117 teams
- Hackerrank.com contests: 2248 rating (99th percentile of users on the site)
 - Hack the Interview VI (U.S.) 2020: **1st** place out of 703 (won \$500 Amazon gift card)
 - Celebrate Neurodiversity Contest 2021: **2nd** place out of 847 (won \$200 headphones)

Combinatorial Optimization Programming Competitions

- Google Hash Code 2021 - Extended round on Kaggle: **7th** place out of 179

Recreational Programming

- Project Euler - Problem 726 (Falling Bottles): 126th person to solve
 - Project Euler - Problem 796 (A Grand Shuffle): 63rd person to solve
 - Advent of Code 2019: 82nd on leaderboard out of ~100,000 participants
 - Advent of Code 2022 - Day 15: 11th person to solve
-

Personal Technical Projects

Fantasy Basketball Bot - using algorithms + ML to win daily fantasy sports

2016-2018

The program predicts NBA player performance per game, then uses a knapsack algorithm to pick the optimal lineup of players for the day, for winning money in Daily Fantasy Sports.

Pluribus (Poker AI) Hand Parser - a script that parses poker games by the AI Pluribus

2019

Pluribus is a poker AI published in a July 2019 *Science* paper. I wrote a program to parse the data logs released by the authors and convert them into a standard form used in the poker community. The output has been downloaded 100,000+ times and used by other poker fans and professionals in Youtube videos, blogs, and courses.

Leadership Experience

Vice President - ACM @ UCI

2015-2018

I organized artificial intelligence games programming competitions and other events for 100+ ACM members, managed the club logistics, and led ICPC competitive programming teams.
