Kevin A. Wang

www.github.com/VitamintK
www.scientist.wang

Education

PhD Student at Brown University *Fall 2023 - ???*

PhD student with Professor Amy Greenwald

University of California, Irvine - BS in Computer Science *2014 - June 2018*

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, with a focus on search / planning / "system 2 thinking".
Currently, 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

Publications can be viewed at https://scholar.google.com/citations?user=Q06Rh6oAAAAJ

Research and Industry Experience

Poker Consulting *2023*

Consulted for a Poker AI startup. Reviewed code and advised on state-of-the-art methods.

Meta AI (FAIR) - AI Resident *July 2022 - July 2023*

Worked 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.

Shift - Software Engineer *Aug 2018 - Dec 2020*

Shift was 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 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".

Service

Reviewer for Artificial Intelligence Journal, NeurIPS 2023, and ICLR 2024.

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)
- IEEEXtreme 2017: **2nd** place out of all **US** teams; **23rd** place **overall** out of 2,121 teams
- IEEEXtreme 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)
- Leetcode.com contests: 2440 rating (top 1,689 / 506,176 users, **top 0.36%**)

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 2023 - Day 11: 2nd person to solve (out of ~50,000 participants)

Personal Technical Projects

Fantasy Basketball Bot - using algorithms + ML to win daily fantasy sports *2016-2018*

Machine learning + modified knapsack to optimize lineups for daily fantasy basketball.

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.

Last Updated: March 2024