ADAM NIK

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EDUCATION

Carleton College
Bachelor of Arts, Computer Science — September 2018-November 2022
3.75 GPA (4.0 scale), 3.77 Major GPA

Relevant Courses Taken

- CS321: Making Decisions with Artificial Intelligence
  - Grade Received: A
  - Notable Topics/Skills: Adversarial Game algorithms, Genetic algorithms, Reinforcement Learning
- CS322: Natural Language Processing
  - Grade Received: A
  - Notable Topics/Skills: Markov Decision Processes, Dialogue Systems/Chatbots, Word Vectors
- CS232: Art, Interactivity, & Robotics
  - Grade Received: A
  - Notable Topics/Skills: Arduino Programming, Circuit Boarding, Work with electronic components
- MATH232: Linear Algebra
  - Grade Received: A

PUBLICATIONS

Adam Nik, Ge Zhang, Xingran Chen, Mingyu Li, and Jie Fu. 2022. 1Cademy @ Causal News Corpus 2022: Leveraging self-training in causality classification of socio-political event data. In *Proceedings of the 5th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE 2022)*, Online. Association for Computational Linguistics

EMNLP 2022 | Paper

Xingran Chen, Ge Zhang, **Adam Nik**, Mingyu Li, and Jie Fu. 2022. 1Cademy @ Causal News Corpus 2022: Enhance causal span detection via Beam-Search-based position selector. In *Proceedings of the 5th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE 2022)*, Online. Association for Computational Linguistics.

EMNLP 2022 | Paper

PRESENTATIONS

Oral Presentations

- 1Cademy @ Causal News Corpus 2022: Enhance causal span detection via beam search-based position selector, presented at EMNLP 2022

Poster Presentations

- 1Cademy @ Causal News Corpus 2022: Leveraging self-training in causality classification of socio-political event data, presented at EMNLP 2022

  Poster

- 1Cademy @ Causal News Corpus 2022: Enhance causal span detection via beam search-based position selector, presented at EMNLP 2022, to be presented at EMNLP 2022

  Poster

RESEARCH EXPERIENCE

1Cademy, University of Michigan April 2022-Present
Junior Researcher and Leader of Computer Vision Community

- Research platform focused on doing work in various topics in Deep Learning and Natural Language Processing

NOTABLE SCHOOL PROJECTS

Senior Comps Project: Intelligent User Interface-Scenic Route Generation
Fall 2022-Winter 2022 | https://cs.carleton.edu/cs_comps/2122/iui/final-results/index.html

- Project focused on path generation algorithm for optimizing scenic value of landmarks along route
- Used a convolutional neural network to classify images along route queried from Flickr
- Worked with Postgres Database to store image & map information and output from CNN
- Completed all front-end development (HTML & CSS) for project

Snake Game AI with Reinforcement Learning, CS321
Fall 2022 | Code: https://github.com/adamnik/Snake-Game-AI
Demo: https://youtu.be/NDdxViC-zsg

- Built a self-learning computer agent that displays human levels of game performance within 50 iterations of the game
- Developed by implementing Approximate Q-Learning with Bellman Equation

Ping Pong LED Snake Game Board, CS232
Winter 2022 | Code: https://github.com/adamnik/Snake-Game-for-Arduino
Demo: https://youtube.com/shorts/xMD4Rlx15m0?feature=share

- Built an 8x8 LED board with ping pong balls as diffusers
- Coded a Snake game compatible with Arduino board
- Completed all soldering, wiring, and circuit board work necessary for project

Scheme Interpreter, CS251: Programming Languages
Spring 2021 | https://github.com/adamnik/Scheme-Interpreter

- Created an interpreter for Scheme language, written in C, as part of course final project

ACADEMIC HONORS, SCHOLARSHIPS, AND GRANTS

Charles & Ellora Alliss Educational Foundation Scholarship Sept. 2018-Nov. 2022

Carleton Grant and Scholarship Sept. 2018-Nov. 2022

Dr. A.E. and Ruth Simonson Scholarship Sept. 2020-Nov. 2022

Sam'75 & Meg Woodside Fund for Career Exploration Summer 2022

RELEVANT SKILLS

Machine Learning Libraries

- PyTorch
- Tensorflow
- HuggingFace Transformers
- NLTK
- spaCy
- NumPy
- Pandas
- OpenAI Gym

Languages

- Python
- C/C++
- Java
- HTML/CSS/JavaScript
- SQL
- Prolog
- RStudio

ATHLETIC CAREER AND AWARDS

Football

- 5-year letter winner (2018-2022)
- Member of team's Leadership Council, 2021-2022

Swimming[*]

- Team Captain for the 2021-2022 season
- All-MIAC Performer, 2022
- 4th all-time performer in 100 yard butterfly at Carleton, 9th all-time in 200 yard butterfly

Awards

- Mel Taube Award Recipient
  - The Mel Taube Memorial Award is given to a senior male athlete at Carleton College who has competed in at least two varsity-level sports, with emphasis on team sports in at least one. The athlete must have demonstrated exceptional loyalty, dedication, and achievement in varsity athletics.
- MIAC Academic All-Conference
  - 3x award winner in Football, 2019-2021
  - 1x award winner in Swimming, 2022

REFERENCES

- Jie Fu, Principal Investigator, Beijing Academy of Artificial Intelligence, fujie@baai.ac.cn

- Dave Musicant, Professor of Computer Science, Carleton College, dmusicant@carleton.edu

- James Ryan, Former Visiting Assistant Professor of Computer Science, Carleton College, james@jamesryan.world

[*] Did not compete during 2019 & 2020 seasons due to injury, did not compete 2021 due to COVID-19