

Rhett Olson

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EDUCATION

University of Minnesota, Twin Cities
College of Science and Engineering, University Honors Program
Bachelor of Science, Computer Science
Bachelor of Science, Mathematics

Minneapolis, MN
expected December 2024

GPA: 3.888

AWARDS

2024 Student Research Competition 3rd Place (Undergraduate), 2024 [ACM SRC Grand Finals](#)

- Won 3rd prize for an extended version of my paper, “An Automatic Approach to Finding Geographic Name Changes on Historical Maps.”
- In this competition, my paper was judged against submissions from the 21 other undergraduate 1st-place winners from student research competitions held by ACM conferences in 2023 across many fields of research.

2023 Student Research Competition 1st Place (Undergraduate), [31st ACM SIGSPATIAL Conference](#)

- Won 1st place for paper, poster, and conference presentation entitled “An Automatic Approach to Finding Geographic Name Changes on Historical Maps”.
- Presented along with other finalists in the main session of the 2023 SIGSPATIAL conference in Hamburg, Germany.

2023 Undergraduate Research Opportunities (UROP) grant recipient

- Awarded a grant by the University of Minnesota to fund a research project on temporal analysis of historical maps with professor [Yao-Yi Chiang](#).

2021-23 Dean's List, College of Science and Engineering

PUBLICATIONS

Olson, R., Kim, J., & Chiang, Y. Y. (2023). An Automatic Approach to Finding Geographic Name Changes on Historical Maps.

RESEARCH EXPERIENCE

[DIMACS REU](#) (*Research Experience for Undergraduates*)

Piscataway, NJ

REU Participant

May 2024 – July 2024

- Researching a project entitled ‘Truth Learning in Social and Adversarial Settings’ with Prof. [Jie Gao](#) and two other undergraduate students at an REU program hosted by Rutgers University.
- Investigating when it is possible for a social network to collectively learn a truth state about the world, despite the presence of adversarial agents that try to spread false information.

Knowledge Computing Lab

Minneapolis, MN

Undergraduate Researcher

May 2023 – ongoing

- Won 1st place in the 2023 [ACM SIGSPATIAL](#) student research competition for authoring an approach for automatically retrieving scanned historical maps of a given place that reveal the different names used by that place over time. This work aims to support scholarly analysis of place name changes.
- Currently developing a machine learning model for dating scanned historical maps based on the place names that appear on them, and when they were in use on other maps.

Robotics: Perception and Manipulation Lab

Minneapolis, MN

Undergraduate Researcher

May 2023 – ongoing

- Contributed to an application for controlling a Boston Dynamics Spot. Acquired a deep understanding of a codebase with over 200 files, and implemented new functionality allowing the robot to navigate between points in a room it has previously visited, while autonomously detecting and dragging away obstacles in its path.
- Collaborated with 4 other undergraduate students, presented progress in lab meetings, tested code with the robot, assisted in onboarding new people to the project by documenting and explaining the system.

TEACHING EXPERIENCE

University of Minnesota

Minneapolis, MN

Undergraduate Teaching Assistant

January 2022 – May 2023

- Leads 3 groups of 30-40 students through weekly lab assignments, with teams of 2-3 other undergraduate teaching assistants. Answers student's questions, provides hints for how to solve problems, gives feedback on the quality of their code. Ensures that all students complete and understand lab problems.
- Support students' learning in office hours. Troubleshoots bugs in students' code, and guides them through the debugging process. Asks questions to assess students' gaps in understanding, and gives mini lectures to close those gaps. Mentors peer students in how to be successful in C.S. coursework with advice from my experience.
- Courses: *Exploring CSCI: Python* (january 2022-may 2022), *Introduction to Programming Principles* (september 2022 - may 2023), *Advanced Programming Principles* (september 2023 - present)

COMMUNITY SERVICE

Hennepin County Library

Minneapolis, MN, January 2020-March 2020

Volunteer Homework Help Tutor

- Supported local elementary through secondary school students by providing free, drop-in tutoring and homework help at a local library.

Murray Middle School

Minneapolis, MN, March 2020-June 2020

Volunteer 1-on-1 Tutor

- Tutored a local grade 7 student to help her navigate online school during the COVID-19 pandemic.

EXTRACURRICULAR ACTIVITIES

Board Games Club, University of Minnesota

Minneapolis, MN, September 2021 – ongoing

- Joins fellow students to learn and play various board games.
- Enjoys meeting new people and teaching them how to play games.

Knitting & Crocheting Club, University of Minnesota

Minneapolis, MN, October 2021 – ongoing

- Gathers with fellow crafters to knit and chat.
- Enjoys inventing new patterns, and teaching knitting concepts to others.

REFERENCES

Professor Yao-Yi Chiang

Department of Computer Science and Engineering, University of Minnesota

5-191 Kenneth H. Keller Hall 200 Union Street SE, Minneapolis, MN 55455, USA

yaoyi@umn.edu

Relationship: Professor and Research advisor of 1 year.

Professor Karthik Desingh

Department of Computer Science and Engineering, University of Minnesota

141 Shepherd Labs 100 Union St SE, Minneapolis, MN 55455, USA

kdesingh@umn.edu

Relationship: Professor and Research advisor of 4 months

Professor Shana Watters

Department of Computer Science and Engineering, University of Minnesota

321 Lind Hall 207 Church Street SE, Minneapolis, MN 55455, USA

watt0087@umn.edu

Relationship: Professor of 2 years