Evan Palmer

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Education

Oregon State University **September 2022 – Present**
Ph.D., Robotics
Advised by Dr. Geoffrey Hollinger

University of Nebraska-Lincoln **August 2018 – May 2022**
B.S., Software Engineering, Highest Distinction
Advised by Dr. Brittany Duncan

Research Experience

Robotic Decision Making Lab (RDML) **September 2022 – Present**
Graduate Research Fellow

- Advancing kinodynamic motion planning algorithms and dynamic control techniques for underwater vehicle manipulator systems

University of Nebraska-Lincoln NIMBUS Lab **January 2020 – August 2022**
Undergraduate Research Assistant

- Created *pymavswarm*, a Python library for developing swarm algorithms and for deploying drone swarms to field environments.
- Successfully designed and deployed a novel multi-agent collision avoidance algorithm using reachability analysis.
- Advanced Human-Robot Interaction research by implementing an sUAS pilot proficiency determination system using distancing algorithms and spectral analysis.

Industry Experience

Marble Technologies **March 2022 – September 2022**
Robotics Engineer Intern

- Developed a ROS 2 robotic manipulation system for the food processing industry.
- Delivered an MVP in three months, supporting demonstrations leading to pre-orders and a $10M Series A.
- Supported hiring and networking efforts by facilitating meetings leading to one core Senior Engineering hire and collaborations with academic partners.

Raytheon BBN Technologies **May 2021 – August 2021**

Software Engineer Intern

- Led the development of swarm technologies used by United States Air Force Academy and West Point cadets for integrating innovative offensive and defensive robot swarm tactics.
- Supported integration of small fixed-wing aircraft into the DARPA OFFSET program which successfully demonstrated field deployment of a swarm with over 100 robots.

Publications

Peer-Reviewed Journal Publications

- S. Kunde, **E. Palmer**, and B. Duncan, "Recognizing User Proficiency in Piloting Small Unmanned Aerial Vehicles (sUAV)", *IEEE Robotics and Automation Letters (RA-L),* 2022

Mentorship

Undergraduates

- John Delfosse (University of Nebraska-Lincoln, NSF REU), 2022
- Mikil Foss (University of Minnesota Twin Cities), 2022

Outreach

JSHS Mentor **December 2022**

- Mentored high schools students working to compete at the Junior Science and Humanities Symposium

Nebraska Hour of Code **November 2021**

- Created and led a robotics activity to teach K-8 students from across Nebraska about the field of robotics

Admitted Student Day – Drones and Robotics **March 2021**

- Spoke to 100 high school seniors about undergraduate majors and research opportunities at the University of Nebraska-Lincoln

Awards

National Defense Science and Engineering Graduate (NDSEG) Fellowship **2022**

- Awarded to U.S. citizens pursuing doctoral degrees in science and engineering disciplines with a selection rate of ~2%

Outstanding Undergraduate Software Engineering Senior Award **2022**

- Awarded to an outstanding senior Software Engineering student at the University of Nebraska-Lincoln School of Computing

Lockard Scholarship **2020**

- Awarded to University of Nebraska-Lincoln Department of Computer Science and Engineering students with outstanding scholastic achievement

Regents Scholarship **2018**

- Awarded to Nebraska students who have demonstrated academic excellence and academic distinction at the highest level