Evan Palmer

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Education

Oregon State University 2022 – 2027 (expected)
Ph.D., Robotics, 4.0 GPA
Advised by Dr. Geoffrey Hollinger

University of Nebraska-Lincoln 2018 – 2022
B.S., Software Engineering, Highest Distinction, 3.98 GPA
Advised by Dr. Brittany Duncan

Research Experience

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

- Creating new safe motion planning and whole-body control algorithms for high degree-of-freedom systems.

Nebraska Intelligent Mobile Unmanned Systems (NIMBUS) Lab 2020 – 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 creating an sUAS pilot proficiency determination system using distancing algorithms and spectral analysis.

Industry Experience

Marble Technologies 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 2021

Software Engineer Intern

- Developed 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 deployment of a swarm with over 100 robots to a field environment.

Awards

National Defense Science and Engineering Graduate (NDSEG) Fellowship 2022

Outstanding University of Nebraska-Lincoln Software Engineering Senior Award 2022

University of Nebraska-Lincoln Lockard Scholarship 2020

University of Nebraska-Lincoln Regents Scholarship 2018

Professional Service

IEEE Robotics and Automation Letters (RA-L) Reviewer 2023

Mentorship

John Delfosse (Undergraduate at University of Nebraska-Lincoln, NSF REU) 2022

Mikil Foss (Undergraduate at University of Minnesota Twin Cities) 2022

Outreach

Junior Science and Humanities Symposium Mentor 2022

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

Nebraska Hour of Code 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 2021

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

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

Skills

Programming Languages: C++, Python, Java, C

Software: MATLAB, Autodesk Eagle, Autodesk Inventor, Adobe Premier, Blender, Jira, Asana

Libraries & Tools: ROS, ROS 2, KDL, MoveIt2, ros2_control, Tensorflow, pytorch, GitHub Actions, Docker, Gazebo, ZeroMQ, Linux, OpenCV, Git, AWS, ArduPilot, PX4, Qt

Development Processes: Agile, Kanban,