Eric Jagodinski

ejagodin@fau.edu — (704)608-2871 — www.jagodinski.com

July 30, 2022

Unmanned Underwater and Surface Vehicles
Lockheed Martin RMS
Riviera Beach, Florida

Dear Hiring Manager,

I am excited to see that Lockheed Martin RMS is hiring a Software Autonomy Engineer for implementing deep learning perception and tracking on unmanned underwater vehicles. With my background in Ocean Engineering and my current research in Deep Reinforcement Learning (DRL) controls of turbulent CFD simulations, I am confident I have the skills to be successful in this role.

My undergraduate capstone project was designing, building, and programming an autonomous surface vehicle capable of GPS waypoint navigation and station keeping. I was electrical team lead in charge of instrumentation integration but also programmed and tested our Arduino microcontroller. Within our 8 month time-frame and $1,500 budget, our prototype could station keep to a 1.5 bodylength radius with 95% accuracy.

In the early stages of my PhD research, I used Convolutional Neural Networks (CNNs) to estimate turbulent conditions with under 10% error (Python, Fortran). Now, I am using a combination of CNNs and Long-Short Term Memory for perception and tracking and DRL (C++) for autonomous actuation control within turbulent fluid simulations (Fortran) with the goal of drag reduction. My PhD has been a wonderful experience, providing me skills in advanced mathematics and physics, software engineering, machine learning and data science. I have learned Python, C++, Fortran and R, employed High Performance Computing, developed strong communication skills through conference presentations and teaching and I am ready to start utilizing these for real world applications.

I earnestly thank you for your time and consideration in this role. My resume and website will provide additional details about my projects and qualifications. I would genuinely enjoy discussing this opportunity with you further. Please do not hesitate to contact me with additional questions.

Sincerely,