

# Logan Luna

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GitHub: <https://github.com/Logan-Cole-Luna>

## Education:

*Embry-Riddle Aeronautical University* | Honors Program

*Graduation: May 2026*

- ❖ **Degree:** Bachelor of Science in Computer Science

- ❖ **Minor:** Computational Mathematics
- ❖ **GPA:** 3.864

## Professional Experience:

*Upcoming Intern*

*Department of Defense, Beam and Optic Control for Laser Weapons,*

*May – August, 2024-2026*

- ❖ Planned development and integration of autonomous intelligence and machine learning algorithms for the enhanced tracking and detection of aircraft.
- ❖ Received mentorship from seasoned professionals in the field.

*Researcher*

*Aircraft Detection & Localization with Computer Vision and Neural Networks – Python 2023-Present*

- ❖ Integrated Computer Vision methodologies with aerial mapping for aircraft recognition, precise location estimation, and real-time monitoring
- ❖ Oriented towards providing independent aircraft recognition to promote enhanced aerial safety

## Skills & Proficiencies:

*Programming Languages:*

- ❖ Python
- ❖ C/C++
- ❖ Java
- ❖ Julia

*Autonomous Intelligence/Machine Learning:*

- ❖ Deep Learning & CNN
- ❖ PyTorch & TensorFlow
- ❖ Computer Vision

*Skills In Mathematics:*

- ❖ Linear Algebra
- ❖ Differential Equations
- ❖ AI/ML Algorithms

## Projects & Clubs:

*Techniques for Denoising Sonar Data while*

*– Python 2023-Present*

*Managing Time Complexity of ML Algorithm*

- ❖ Created methods to effectively process sonar data containing significant noise while managing time complexity
- ❖ Aimed towards providing denoised data for object detection in environmental analysis

*Enhancing Underwater Object Recognition with*

*– Python 2023-Present*

*Computer Vision and Filtering Techniques*

- ❖ Formulated an algorithm to utilize Kalman Filter to combine predictions from Yolo v8 (Object detection), SuperPoint (Feature Point detection), and SuperGlue (image matching) for live data analysis

*Autonomous Maritime Robotics Association, Software System Lead*

*2022-Present*

- ❖ Facilitated learning process for new members, planned project goals and coordinated the software team
- ❖ Utilized computer vision & neural networks to train AI in object detection & decision making

## Achievements & Awards:

*SMART(Science, Mathematics, and Research for Transformation) Scholarship*

*2023-Present*

- ❖ A competitive program funded by the Department of Defense
- ❖ Recognizes and supports exceptional academic achievements and commitment to pursuing careers in STEM fields

*1<sup>st</sup> Place In Embry-Riddle Student Research Symposium 2023*

- ❖ Platform for researchers to showcase scholarly pursuits, awarded after competing against 78 researchers