



Aviation/Engineering Operations aNalysis

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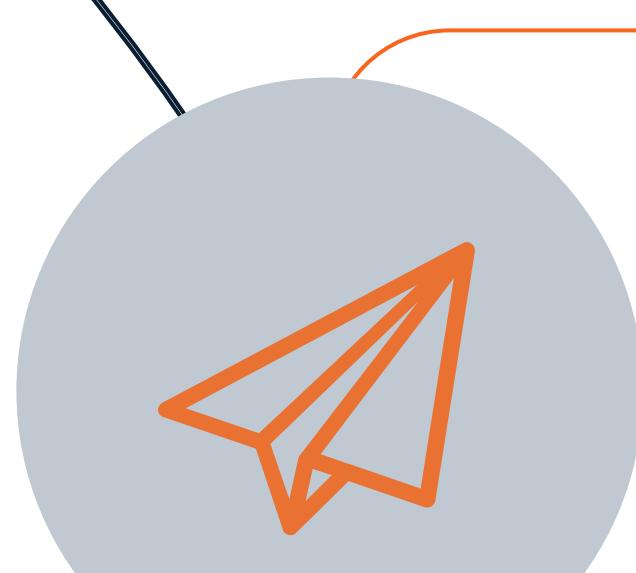


Welcome to our lab!

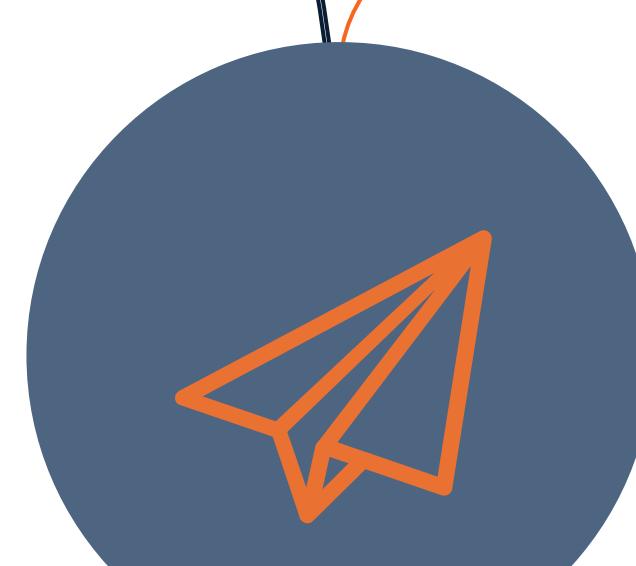
We aim to improve flight for all by addressing issues of **performance** in **training** and **operations**. We use **data analytics**, **human factors** methods, and flight simulation.



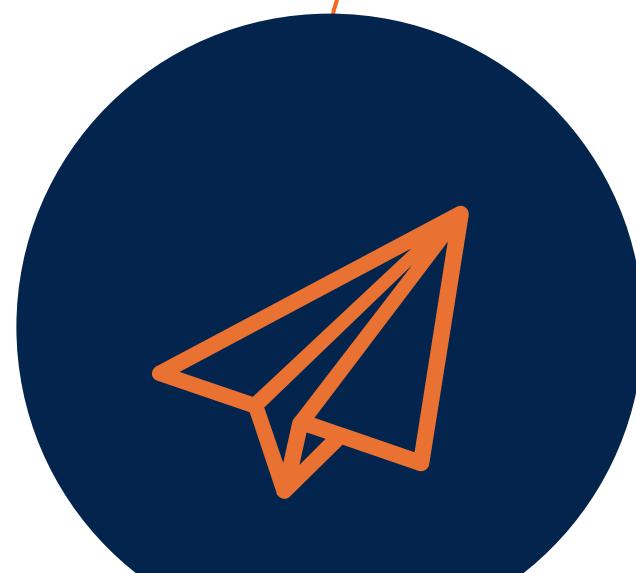
Some of our undergraduate students...



...want to see what research is all about and choose to shadow a graduate student in learning more before deciding what they want to do.



...have specific skills they want to develop in preparation for graduate school or a future career and need help with applying them to a problem.



...come in with an interest in learning more a topic and receive guidance while they work independently. Their interest may develop in a project down the road.

Want to learn more?

You can find information on our current projects and students as well as a list of our publications and research products online.

www.aeonresearch.org

What projects can an undergraduate student be involved with in the lab?

You can select projects from three tracks depending on the type of skill you want to develop through your project. We will discuss your options when you first meet with us to match you to something specific. If you have other ideas for knowledge you want to pursue and you think it fits the lab's mission, you are welcome to bring it up as a fourth option and we will still provide all the guidance we can.

Historical accident studies

Why do it? We want to identify patterns in accident causation so we can work towards preventing them!

Example project: Analysis of demographic factors in weather-related accidents

Skills you will develop:

- Working with relational databases
- Writing simple data analysis code
- Statistical inference testing

Flight data analysis

Why do it? We can learn a lot by looking back at a flight backwards through the objective data.

Example project: Identification of exceedances in instrument approaches from flight data

Skills you will develop:

- More advanced data processing and analytics
- Machine learning, clustering
- Exceedance/outlier detection

Physiological monitoring

Why do it? Metrics like heart rate and eye tracking can help us understand how humans react.

Example project: Development of a real-time visualization dashboard and control station

Skills you will develop:

- Data transfer and syncing protocols (LSL)
- Programming for interface design and data analysis
- Understanding of metrics



Want to visit?

