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# Ellis Thompson

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## RESEARCH INTERESTS

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Reinforcement Learning, Machine Learning, Multi-Agent Reinforcement Learning, Computer Vision  
Air Traffic Management (ATM), UAS Traffic Management (UTM), Autonomous Transport Systems

## EDUCATION

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### George Washington University

*Ph.D. in Computer Science*

*Aug. 2021 - Present*

Advisor: Dr. Peng Wei, Dr. Robert Pless

### Swansea University

*MSc in Computer Science*

*Sep. 2018 - July 2021*

Advisor: Dr. Bertie Muller

Dissertation: Reinforcement Learning for Air Traffic Management

Award Achieved: 1st Class (Hons)

### University of Chester

*CertHE in Computer Science*

*Sep. 2017 - July 2018*

## RESEARCH EXPERIENCE

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### George Washington University

Washington, DC

*Ph.D. Student and Graduate Research Assistant*

*Aug. 2021 - Present*

- Designing a risk assessment based system to be part of an in-time learning-based aviation safety management system (ILASMS) for scalable advanced air mobility (AAM) on a NASA funded project.
- Performing research on autonomous control systems for traffic management in the terminal airspace.

### Swansea University

Swansea, UK

*MSci Student*

*Sep. 2019 - July 2021*

- Adapted an existing conflict avoidance system to utilise altitude changes to avoid conflict states between en-route aircraft.
- Performed research into possible solutions for utilising airspace sectors for autonomous air traffic management, utilising reinforcement learning.

## SELECTED COURSEWORK

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Machine Learning (Swansea)

Data Visualisation (Swansea)

Big Data & Data Mining (Swansea)

Mathematics for Data Science (Swansea)

## SKILLS

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Python (TensorFlow, PyTorch, SciKitLearn), C#, Java, C++, HTML, JavaScript (Node.js), Tableau