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# **Ellis Thompson**

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#### RESEARCH INTERESTS

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

### **EDUCATION**

## **George Washington University**

Ph.D. in Computer Science Advisor: Dr. Peng Wei

Aug. 2021 - Present

# **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

#### **George Washington University**

Ph.D. Student and Graduate Research Assistant

Washington, DC

- 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

Machine Learning (Swansea, GWU) Artificial Intelligence (GWU)

Data Visualisation (Swansea)

Mathematics for Data Science (Swansea)

Big Data & Data Mining (Swansea)

## **SKILLS**

Python (TensorFlow, PyTorch, SciKitLearn), C#, Java, C++, HTML, JavaScript (Node.Js), Tableu