JAN-HENDRIK EWERS

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PROFILE

Highly motivated and results-oriented PhD candidate in Aerospace Systems with a passion for using machine learning to develop innovative solutions for real-world problems. Possesses strong research experience in path planning for search and rescue applications, with a focus on developing algorithms that leverage machine learning and deep reinforcement learning. Proven ability to collaborate effectively in a team environment and excellent communication skills.

RESEARCH EXPERIENCE

University of Glasgow

Machine Learning Drive Path Planning for Search and Rescue

📅 2021 – Ongoing

- PhD research project with support from Police Scotland Air Support Unit
- Applying supervised machine learning and deep reinforcement learning to enhance the search planning state of the art
- Successfully collaborated with various members of the Space Exploration Technologies research group
- Attendance of IFAC 2023 World Congress
- Submission to top-level conferences (*NeurIPS 2024, IROS 2024*) and Q1 journals (*IEEE RA-L, IEEE SMCS*)

University of Glasgow

Optimal Path Planning for Search and Rescue

📅 2020 – 2021

- MEng project in collaboration with Police Scotland Air Support Unit
- Implementing probability map based search path algorithms, as well as presenting a novel solution using numerical optimisation methods
- Created a novel technique for polynomial spline trajectory generation along a path
- Resulted in peer-reviewed journal publication in *Advanced Control for Applications*

EDUCATION

PhD Aerospace Systems

University Of Glasgow

📅 October 2021 – Ongoing (March 2025)

- Researching "Machine Learning Driven Path Planning For Search and Rescue"

MEng Aerospace Systems

University Of Glasgow

📅 September 2016 – June 2021

- Graduated with Honours of the First Class.
- Awarded the British Aerospace Engineering Systems Prize 2021 for the best industrially relevant final year project
- Selected for University of Glasgow's 2017 – 2021 Engineering Excellence Lists.

EXPERIENCE

Gibson Robotics

Systems Engineer (hybrid)

📅 June 2020 – Ongoing

- Leading development on systems for counter-UAV systems
- Assisted the company in achieving DASA funding and to secure private investment through various V1 proof of concept projects

BAE Systems

Intern (full-time)

📅 June 2019 – September 2019

- Automation of processes saving 300 man hours per annum
- Implemented technology to streamline inter-team communications

University of Glasgow

Graduate Teaching Assistant (part-time)

📅 September 2019 - Ongoing

- Principal GTA for design project courses
- Second supervisor for various MSc projects

University of Glasgow Sports Association Club

Executive Committee Member (part-time)

📅 2017 – 2020

- Treasurer (part-time) 2018/2020
- President (part-time) 2020/2021
- Active committee member of the GUSA Shinty Club

SKILLS

- **Software:** Python, PyTorch, MATLAB, C/C++, Linux, ROS/MAVROS/PX4, Git
- **Soft skills:** Public speaking, leading teams and collaborations
- **Languages:** English (native), German (native), French (beginner)