

Learning to Explore: A Systematic Review of Learning-Based Single MAV Exploration in Confined Environments- Replication Package

IEEE Xplore search

1. Search string

"Autonomous Exploration"

2. Fields searched

- All Metadata

3. Filters applied (Publication Topics)

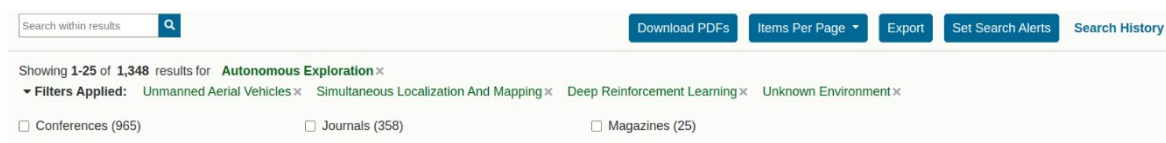
- Unmanned Aerial Vehicles
- Deep Reinforcement Learning
- Simultaneous Localization and Mapping
- Unknown Environment
- Conferences / Journals (as applicable)

4. Date of search

- Initial search was conducted on: 30 August 2024, then the final supplementary search on 30 June 2025.
- The document types reviewed included peer-reviewed conference and journal articles

5. Evidence of search as at 30 August 2024

Screenshots of the IEEE Xplore search interface, applied filters, and result counts are included in the replication package to document the state of the database at the time of the search.



ScienceDirect Search (Elsevier)

1. Search string

"Autonomous Exploration" AND "Deep Reinforcement Learning" AND "Unknown Environments"

2. Fields searched

- Full text
- Title
- Abstract
- Keywords

(Using the default ScienceDirect search across *Articles*)

3. Filters applied

- Initial search was conducted on: 30 August 2024 (1995–2024), then the final supplementary search on 30 June 2025 (1995–2025).
- The document types reviewed included peer-reviewed research articles.

(ScienceDirect does not support topic-based filters equivalent to IEEE Xplore; therefore, relevance was refined during title and abstract screening.)

4. Date of search

- Initial search conducted on: 30 August 2024
- Final supplementary search conducted on: 30 June 2025

5. Evidence of search

Screenshots of the ScienceDirect search interface, applied filters, and result counts are included in the replication package to document the state of the database at the time of the search.



Web of Science Search

1. Search string

“autonomous exploration AND deep reinforcement learning

2. Fields searched

- Topic (Title, Abstract, Author Keywords, Keywords)

3. Filters applied

- Initial search was conducted on: 30 August 2024, then the final supplementary search on 30 June 2025.
- The document types reviewed included peer-reviewed research articles.

4. Date of search

- Initial search conducted on 30 August 2024
- Supplementary validation search conducted on 30 June 2025

5. Evidence of search

Screenshots of the Web of Science search interface, applied filters, and result counts are included in the replication package to document the state of the database at the time of the search.

