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# *realtwin: A Unified Simulation Scenario Generation Tool for Mobility*

# *Names of authors / main developers (incl. affiliations, addresses, email)*

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# Abstract

# *(ca. 100 words)*

Real-Twin is a unified, simulation platform-agnostic scenario generation tool designed to streamline and standardize the evaluation of emerging mobility technologies. It provides an end-to-end framework that includes robust workflows, integrated tools, and comprehensive metrics to generate, calibrate, and benchmark microscopic traffic simulation scenarios across multiple platforms.

# Keywords

# *(maximum of six)*

# Metadata

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| **Nr** | **Code metadata description** | ***Metadata*** |
| C1 | Current code version | *V.0.1.0* |
| C2 | Permanent link to code/repository used for this code version | [*https://github.com/ORNL-Real-Sim/Real-Twin*](https://github.com/ORNL-Real-Sim/Real-Twin) |
| C3 | Permanent link to reproducible capsule | [*https://real-twin.readthedocs.io/en/latest/index.html#*](https://real-twin.readthedocs.io/en/latest/index.html#) |
| C4 | Legal code license | *GNU GPLv3* |
| C5 | Code versioning system used | *git* |
| C6 | Software code languages, tools and services used | *python* |
| C7 | Compilation requirements, operating environments and dependencies | *Network, pandas, openpyxl, osmnx, sumolib, traci, pyproj, pyufunc, pyyaml, shapely, mealpy, xlrd, folium, matplotlib, rich* |
| C8 | If available, link to developer documentation/manual | [*https://github.com/ORNL-Real-Sim/Real-Twin/blob/main/CHANGELOG.md*](https://github.com/ORNL-Real-Sim/Real-Twin/blob/main/CHANGELOG.md) |
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# Conclusions

**Acknowledgements**

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