

Resource Summary Report

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VisTrails

RRID:SCR_006261

Type: Tool

Proper Citation

VisTrails (RRID:SCR_006261)

Resource Information

URL: <http://www.vistrails.org/>

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Description: Open-source scientific workflow and provenance management system that provides support for simulations, data exploration and visualization. It was designed to manage these rapidly-evolving workflows. VisTrails has a comprehensive provenance infrastructure that maintains detailed history information about the steps followed and data derived in the course of an exploratory task: VisTrails maintains provenance of data products, of the workflows that derive these products and their executions. This information is persisted as XML files or in a relational database, and it allows users to navigate workflow versions in an intuitive way, to undo changes but not lose any results, to visually compare different workflows and their results, and to examine the actions that led to a result. It also enables a series operations and user interfaces that simplify workflow design and use, including the ability to create and refine workflows by analogy and to query workflows by example. VisTrails supports the creation and execution of workflows. It allows the combination of loosely-coupled resources, specialized libraries, grid and Web services. The released version comes with support for several packages including, VTK, Image Magick, Web Services, and pylab. You can also download packages contributed by users, as well as create your own packages/modules. Workflows can be run interactively, through the VisTrails GUI, or in batch using a VisTrails server. VisTrails is written in Python and it uses the multi-platform Qt library for its user interface. It runs on Mac, Linux and Windows. Provenance-rich results derived by VisTrails can be included in LaTeX, Wiki, Microsoft Word and PowerPoint documents.

Abbreviations: VisTrails

Synonyms: Vis Trails

Resource Type: data processing software, software application, software resource, workflow software

Keywords: workflow, provenance, simulation, data exploration, visualization, data analysis, management system, python, mac, linux, windows

Funding: DOE ;
IBM ;
NSF IIS-0905385;
NSF IIS-0844572;
NSF IIS CAREER-0746500;
NSF CNS-0751152;
NSF IIS-0513692;
NSF CCF-0401498;
NSF CNS-0541560;
NSF OISE-0405402;
NSF OCE-0424602;
NSF CNS-0524096;
NSF IIS-0534628

Availability: Open unspecified license

Resource Name: VisTrails

Resource ID: SCR_006261

Alternate IDs: nif-0000-06694

Record Creation Time: 20220129T080235+0000

Record Last Update: 20260905T133000+0000

Ratings and Alerts

No rating or validation information has been found for VisTrails.

No alerts have been found for VisTrails.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 20 mentions in open access literature.

Listed below are recent publications. The full list is available at [Kravitz](#) .

Abedin I, et al. (2026) Conservation insights for the Critically Endangered Black Softshell Turtle (*Nilssonia nigricans*) through landscape genetics approach in South Asia. Scientific reports, 16(1).

Abedin I, et al. (2025) Predicting climate-driven habitat dynamics of adjutants for implementing strategic conservation measures in South and Southeast Asian landscape. *Scientific reports*, 15(1), 5986.

Abedin I, et al. (2025) Fading into Obscurity: Impact of Climate Change on Suitable Habitats for Two Lesser-Known Giant Flying Squirrels (Sciuridae: Petaurista) in Northeastern India. *Biology*, 14(3).

Abedin I, et al. (2025) Lineages to landscapes: mitogenomic insights and climate refugia informing proactive conservation of the endangered Tricarinate Hill Turtle (*Melanochelys tricarinata*) in the Indian subcontinent. *Scientific reports*, 15(1), 42751.

Abedin I, et al. (2025) Future of snakebite risk in India: Consequence of climate change and the shifting habitats of the big four species in next five decades. *PLoS neglected tropical diseases*, 19(9), e0013464.

Abedin I, et al. (2024) Fragile futures: Evaluating habitat and climate change response of hog badgers (*Mustelidae: Arctonyx*) in the conservation landscape of mainland Asia. *Ecology and evolution*, 14(8), e70160.

Dutta R, et al. (2024) Beyond traditional methods: Innovative integration of LISS IV and Sentinel 2A imagery for unparalleled insight into Himalayan ibex habitat suitability. *PloS one*, 19(10), e0306917.

Kang W, et al. (2022) Habitat suitability and connectivity modeling predict genetic population structure and priority control areas for invasive nutria (*Myocastor coypus*) in a temperate river basin. *PloS one*, 17(12), e0279082.

Mukherjee T, et al. (2020) Past, Present and Future: Combining habitat suitability and future landcover simulation for long-term conservation management of Indian rhino. *Scientific reports*, 10(1), 606.

Young NE, et al. (2020) A modeling workflow that balances automation and human intervention to inform invasive plant management decisions at multiple spatial scales. *PloS one*, 15(3), e0229253.

Sharma LK, et al. (2019) Identifying suitable habitat and corridors for Indian Grey Wolf (*Canis lupus pallipes*) in Chotta Nagpur Plateau and Lower Gangetic Planes: A species with differential management needs. *PloS one*, 14(4), e0215019.

Hayes MA, et al. (2018) Assessing the potential impacts of a changing climate on the distribution of a rabies virus vector. *PloS one*, 13(2), e0192887.

Salas EAL, et al. (2018) Habitat assessment of Marco Polo sheep (*Ovis ammon polii*) in Eastern Tajikistan: Modeling the effects of climate change. *Ecology and evolution*, 8(10), 5124.

Woodward B, et al. (2017) Forest harvest dataset for northern Colorado Rocky Mountains (1984-2015) generated from a Landsat time series and existing forest harvest records. *Data in brief*, 15, 724.

Salas EAL, et al. (2017) Summer and winter habitat suitability of Marco Polo argali in southeastern Tajikistan: A modeling approach. *Heliyon*, 3(11), e00445.

Zehl L, et al. (2016) Handling Metadata in a Neurophysiology Laboratory. *Frontiers in neuroinformatics*, 10, 26.

Hayes MA, et al. (2015) Seasonally-Dynamic Presence-Only Species Distribution Models for a Cryptic Migratory Bat Impacted by Wind Energy Development. *PloS one*, 10(7), e0132599.

Goodman A, et al. (2014) Ten simple rules for the care and feeding of scientific data. *PLoS computational biology*, 10(4), e1003542.

Kubilius J, et al. (2013) A framework for streamlining research workflow in neuroscience and psychology. *Frontiers in neuroinformatics*, 7, 52.

Bellec P, et al. (2012) The pipeline system for Octave and Matlab (PSOM): a lightweight scripting framework and execution engine for scientific workflows. *Frontiers in neuroinformatics*, 6, 7.