Stanford



James Douglass

Software Architect, Woods Research Natural Capital Project

Bio

BIO

James Douglass (he/him) is the Software Architect for the Natural Capital Project. His current work focuses on expanding access to InVEST through better tooling in heterogeneous compute and development environments, supporting research efforts and identifying and prototyping impactful improvements to NatCap's Science and Technology offerings. In previous roles with NatCap, James has led the technical strategy of InVEST, led the development of OPAL, and previously served as lead of the Software Team. James received his B.S in Computer Science from St. Lawrence University.

EDUCATION AND CERTIFICATIONS

- BS, St. Lawrence University , Computer Science (2010)

LINKS

- GitHub: https://github.com/phargogh

Professional

WORK EXPERIENCE

- Software Engineer - Natural Capital Project, Stanford University (July 5, 2011 - March 1, 2014)
- Senior Software Engineer - Natural Capital Project, Stanford University (March 1, 2014 - October 1, 2014)
- Software Lead - Natural Capital Project, Stanford University (December 1, 2014 - December 1, 2021)
- Software Architect - Natural Capital Project, Stanford University (12/1/2021 - present)

SKILLS AND EXPERTISE

Administrative Operations

- Calendaring - Google
- Calendaring - Outlook
- Drupal
- Gmail
- Google Docs
- Google Drive
- Google Forms
- Google Sheets
- Google Slides

- Leadership
- Microsoft Excel
- Microsoft Office
- Microsoft PowerPoint
- Project Management
- Slack
- Strategic Planning
- WordPress
- Zoom

Information Technology

- Application Development
- Application Programming Interface (API)
- Cloud
- Data Management
- Geographic Information System (GIS)
- High-Performance Computing (HPC)
- Information Architecture
- Infrastructure-as-a-Service (IaaS)
- Linux
- Project Management
- Remote Work/Mobility
- Research Computing
- Research Data
- Storage
- Virtualization

Publications

PUBLICATIONS

- **Landscape efficiency frontiers for biodiversity, climate mitigation, and net economic value.** *Science (New York, N.Y.)*
  Polasky, S., Hawthorne, P. L., Chaplin-Kramer, R., Smith, J., Gerber, J. S., Mamun, S., Ruckelshaus, M., Russ, J., Schmitt, R., Vogl, A. L., Castonguay, A. C., Douglass, J., Kowal, et al
  2026; 392 (6802): 1069-1074

- **Calibrating and validating the Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST) urban cooling model: case studies in France and the United States** *GEOSCIENTIFIC MODEL DEVELOPMENT*
  Hamel, P., Bosch, M., Tardieu, L., Lemonsu, A., de Munck, C., Nootenboom, C., Viguie, V., Lonsdorf, E., Douglass, J. A., Sharp, R. P.
  2024; 17 (12): 4755-4771

- **Incorporating blue carbon sequestration benefits into sub-national climate policies** *GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY DIMENSIONS*
  Wedding, L. M., Moritsch, M., Verutes, G., Arkema, K., Hartge, E., Reiblich, J., Douglass, J., Taylor, S., Strong, A. L.
  2021; 69

- **Mapping the benefits of nature in cities with the InVEST software** *NPJ URBAN SUSTAINABILITY*

Hamel, P., Guerry, A. D., Polasky, S., Han, B., Douglass, J. A., Hamann, M., Janke, B., Kuiper, J. J., Levrel, H., Liu, H., Lonsdorf, E., McDonald, R. I., Nootenboom, et al

2021; 1 (1)

- **OPAL: An open-source software tool for integrating biodiversity and ecosystem services into impact assessment and mitigation decisions** *ENVIRONMENTAL MODELLING & SOFTWARE*

  Mandle, L., Douglass, J., Lozano, J. S., Sharp, R. P., Vogl, A. L., Denu, D., Walschburger, T., Tanis, H.

  2016; 84: 121-133