

VIB Hackathon on spatial omics tools and methods

**Benjamin Rombaut^{1,2,3}, Lotte Pollaris^{1,2,3}, Chananchida Sang-aram^{1,2,3},
Michiel Ver Cruysse^{1,3}, Robrecht Cannoodt⁵, Frank Vernailen⁴, Arne
Defauw⁴, Julien Mortier⁴, ...¹, and Yvan Saeys^{1,2,3}**

1 Data Mining and Modelling for Biomedicine, VIB-UGent Center for Inflammation Research, Ghent, Belgium **2** Department of Applied Mathematics, Computer Science and Statistics, Ghent University, Ghent, Belgium **3** VIB Center for AI and Computational Biology, Ghent, Belgium **4** VIB Spatial Catalyst **5** Data Intuitive

BioHackathon series:

[VIB Hackathon on spatial omics](#)

Ghent, Belgium, 2024

[Code repository](#)

Submitted: 29 May 2024

License:

Authors retain copyright and release the work under a Creative Commons Attribution 4.0 International License ([CC-BY](#)).

Published by [BioHackrXiv.org](#)

Introduction

[Main goal of the hackathon and setting](Marconato et al., 2024)

Results

[Main outcomes]

Workgroup pipelines

[Workgroup outcomes]

Workgroup spatial transcriptomics

[Workgroup outcomes]

Workgroup spatial proteomics

[Workgroup outcomes]

Workgroup spatial multi-omics

[Workgroup outcomes]

Workgroup cell-cell communication

[Workgroup outcomes]

Discussion

[Main general takeaways for the field and future outlook]

Acknowledgements

[Sponsors, (travel) grants, infrastructure...]

Supplemental information

Tables and figures

References

Marconato, L., Palla, G., Yamauchi, K. A., Virshup, I., Heidari, E., Treis, T., Vierdag, W.-M., Toth, M., Stockhaus, S., Shrestha, R. B., Rombaut, B., Pollaris, L., Lehner, L., Vöhringer, H., Kats, I., Saeys, Y., Saka, S. K., Huber, W., Gerstung, M., ... Stegle, O. (2024). SpatialData: An open and universal data framework for spatial omics. *Nature Methods*, 1–5. <https://doi.org/10.1038/s41592-024-02212-x> [cito:usesMethodIn]