Jesse Patrick Harrison, PhD

Personal website | LinkedIn | GitHub | ORCID | Google Scholar

---

Current employment

- 01.01.2024 - present
    - Development Manager (AI and Data Analytics), Advanced Computing Facility, CSC - IT Center for Science Ltd, Espoo, Finland

---

Previous work experience

- Positions at CSC - IT Center for Science Ltd, Espoo, Finland
    - 01.01.2023 - 31.12.2023: Senior Data Scientist
    - 08.04.2019 - 31.12.2022: Data Scientist
- Postdoctoral positions
    - 01.09.2018 - 25.02.2019: Turku Bioscience, Turku, Finland
    - 01.10.2017 - 07.09.2018: University of Helsinki, Helsinki, Finland
    - 16.11.2015 - 15.02.2017: University Vienna, Vienna, Austria
    - 01.06.2012 - 31.05.2015: The University of Edinburgh, Edinburgh, UK
- Other work experience
    - 01.06.2015 - 31.12.2015: Technical Advisory Group Member, Defra, London, UK
    - Advising UK Government on plastic biodegradability in aquatic environments

---

Managerial and leadership experience

- Managerial experience
    - Line manager for group of up to 12 AI/ML specialists and data scientists at CSC
    - 27.03.2025: Completed Aalto University EE First Time Manager course
- Project leadership
    - 2025 - present: local / CSC PI, Horizon Europe ELLIOT (European Large Open Multi-Modal Foundation Models For Robust Generalization On Arbitrary Data Streams)
    - 2022 - 2024: PI (Scientific Coordinator), Horizon Europe Biodiversity Digital Twin
    - 2020 - 2023: Work Package Lead, H2020 HPC/Exascale Centre of Excellence for Personalised Medicine
- Student supervision
    - 2013 - present: Total of five Masters theses and one Bachelors thesis (jointly with The University of Edinburgh, Aalto University and Kajaani University of Applied Sciences)

Degrees

- Degree certificates
    - 31.07.2012: PhD, Molecular Environmental Microbiology and FT-IR Microspectroscopy, The University of Sheffield, Sheffield, UK
    - 01.07.2008: MBiolSci (1st Class Hons), Biology with Conservation and Biodiversity, The University of Sheffield, Sheffield, UK
- Title of Docent
    - 02.06.2023: Environmental Sciences, University of Helsinki, Helsinki, Finland

Examples of R&D output

- Project deliverables
  - Several Horizon Europe / H2020 project deliverables (including as lead author) in fields of digital twinning and personalized medicine
- Software and user documentation
  - r-env: Apptainer container including R, RStudio and TensorFlow on CSC Puhti supercomputer
  - Semi-automated microbial community analysis toolbox for Chipster NGS platform
  - H2020 HPC/Exascale Centre of Excellence for Personalised Medicine user documentation
- Method development
  - Pioneered methods for FT-IR imaging of microplastics in marine sediments
  - Developed first microcosm experiments to characterize biofilm formation on microplastics in intertidal sediments using genetic fingerprinting
- Teaching materials
  - R and bioinformatics course materials developed for CSC

Teaching experience

- Pedagogical training
  - 2019 - 2022: Participation in CSC internal trainer development (Training the Trainer)
  - 21.08.2019: Data Carpentry Instructor certification
- Teaching activity
  - 2019-2022: Lead instructor on CSC R courses and co-instructor on Microbial Community Analysis Using Chipster course
    * Course materials (OA) published under CSC GitHub organization and CSC e-learning platform eLena
  - 2016: International Fluorescence *In Situ* Hybridization Course instructor (University of Vienna)
  - 2013: Co-developer, Astrobiology and the Search for Extraterrestrial Life MOOC, The University of Edinburgh (90K registrations to date)

Other scientific merits

- Committee and panel roles
  - 2021-: Finnish Open Research Methods Policy Working Group
  - 2018: Research Programme Committee member (Biological and Environmental Sciences, University of Helsinki, Finland)
  - 2013-2016: PhD Project Steering Committee member (jointly with Swansea University and Fera Science Ltd, UK)
  - 2014-2015: Invited member, European Commission AstRoMap European Astrobiology Roadmap panel
- Peer review activities
  - 50+ reviews for 20+ scientific journals
  - Grant reviewer for Dutch Research Council, French National Research Agency and Portuguese Foundation for Science and Technology
- Science communication
  - Several video and radio interviews (e.g. AMD, BBC Radio 4, ARTE)