Rutger Vervoordeldonk

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Education

2024 - Present — PhD Atmospheric and Environmental Sciences in the Land Surface Dynamics group of the University of Edinburgh
Working title: "Quantitative analysis of drainage network patterns"

2020 - 2024 — BSc (Hons) Geology and Physical Geography, University of Edinburgh (1st Class, 83% overall)
Dissertation titled "Quantitative assessment of the structural control of folds on Appalachian drainage network patterns" awarded with a 93% grade

Employment

2024 - Present — Tutor and demonstrator in the School of GeoSciences on the following courses: Earth Science Data Analysis 2; Physical Geography; Geomorphology; Field Skills for Geology and Physical Geography

2022 — 9-week internship at Netherlands-based civil engineering consultancy Geonius Geotechniek B.V.

Software development

2024 - Present — Contributor to LSDTopoTools, software for topographic analysis developed at the University of Edinburgh (https://github.com/LSDtopotools), with the following routines:

- Implementation of edge-tracing algorithms
- Extraction of drainage basin outlines on pixel edges
- Automatised extraction of the drainage divide angle metric (Abrahams, 1980, *Geographical Analysis*)
- Value-propagation of channel properties onto topologically-organised hillslope pixels
- Implementation of drainage divide organisation algorithm (Schwanghart and Scherler, 2020, *Earth Surf. Dyn.*) [under construction]

Awards

2024 — Ken Walton prize for the best physical geography undergraduate dissertation in Scotland in 2024, awarded by the Royal Scottish Geographical Society

2022 — William Dawson Trust Bursary (2 x £1000), awarded annually to three third-year students in the College of Science and Engineering (University of Edinburgh) based on outstanding academic achievement in the previous two years