Todd M. **Ellis**

DATA ANALYST & STATISTICAL PROGRAMMER

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SUMMARY

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EDUCATION

Doctor of Philosophy, Biological Sciences   *Sandy Bay, TAS, Australia*

UNIVERSITY OF TASMANIA   *2019 - 2023*

- Dissertation: Dynamic mapping and analysis of New South Wales fire regimes: Past, present, and future
- Supervisors: Drs. Grant J. Williamson and David M.J.S. Bowman

Master of Science, Geography   *Bellingham, WA, USA*

WESTERN WASHINGTON UNIVERSITY   *2013 - 2016*

- Thesis: Climatic drivers of western spruce budworm outbreaks in the Okanogan Highlands
- Supervisor: Dr. Aquila Flower

Bachelor of Science, Physical Geography / Geology   *San Marcos, TX, USA*

TEXAS STATE UNIVERSITY   *2007 - 2012*

- Capstone: Wildfire hazard data for the Yellowstone National Park Ecosystem: 1987 - 1988

PROFESSIONAL EXPERIENCE

Data Analyst   *Sandy Bay, TAS, Australia*

UNIVERSITY OF TASMANIA: DIVISION OF FUTURE STUDENTS   *2021-02 - present*

- Developing models and tools for meeting university targets and KPIs using statistical and machine learning
- Overseeing development of internal reporting and statistical packages
- Designing and implementing data analytics training seminars
- Processing, analysing and reporting data to promote and review university programs
- Managing design and implementation of broad-scale university ML models for directing future university marketing, funding, and course creation

Adjunct Researcher   *Sandy Bay, TAS, Australia*

UNIVERSITY OF TASMANIA: COLLEGE OF SCIENCES AND ENGINEERING   *2019-08 - present*

- Overseeing multi-year projct design and implementation addressing wildfire and global climate change challenges
- Managing custom platform for interactive web-mapping, on-the-fly statistical analyses, and novel data visualisation
- Developing complex data-processing and analysis pipelines using high-performance computing and big data
- Collaborating with national and international research teams tackling climate change risk and mitigation

Sustainability Analyst   *Sandy Bay, TAS, Australia*

UNIVERSITY OF TASMANIA: DIVISION OF FUTURE STUDENTS   *2019-10 - 2021-02*

- Processed, analysed, and reported data to promote and review institution programmes
- Developed pipelines for automating data cleaning and collation
- Prepared data and briefings for global institution rankings
- Promoted nation-wide sustainability targets using data dashboards and reports

Independent Research Contractor

SELF-EMPLOYED   *2018-07 - 2020-09*

- Developed large-scale data-processing methodologies for resource and hazard management
- Produced interactive, dynamic dashboard products for exploratory data analysis and modelling

Data & GIS Analyst   *Austin, TX, USA*

APEX SYSTEMS: APPLE, INC.   *2018-12 - 2019-05*

- Developed and standardised data-processing methods for vector and multispectral raster datasets
- Prepared statistical smmaries, models, and analytical reports
- Managed and processed corporate GIS databases using data-driven software and programming languages
- Led research and development projects to define novel methodologies for geospatial data
- Collaboratd with a global network of analysts and technicians

Faculty Research Assistant

Wenatchee, WA, USA

OREGON STATE UNIVERSITY: USDA FOREST SERVICE FORESTRY SCIENCES LABORATORY

2017-11 - 2018-06

- Gathered and analysed ecological data using statistical software
- Built analytical models using a variety of programming languages
- Created and maintained relational databases for government research
- Converted complex data and findings into understandable figures and summary reports

Biological Science Technician II

Ridgefield, WA, USA

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE: REGION 5

2017-08 - 2017-11

- Collected and recorded biological data for government research and both commercial and tribal fisheries
- Applied QA/QC to develop electronic biolgoical data collection system and relational database
- Analysed biological fisheries data for research reporting
- Designed, built, and maintained department, fisheries, and commercial research equipment
- Monitord critical fish migrations using DNA sampling and the PTAGIS coordination project
- Conducted outreach to the public, providing information on fisheries research, management principles, and local regulations
- Received training in fish, plant, and organism identification, government safety procedures, boat operation, and defensive driving

Substitute Teacher

Kelso, WA, USA

KELSO SCHOOL DISTRICT: BEACON HILL ELEMENTARY SCHOOL

2017-01 - 2017-08

- Taught a variety of classrooms, with a focus on K-5 primary education, special education, and LAP classrooms using specialised learning plans
- Engaged young students with an interest in scientific research, giving special outreach presentations
- Helped integrate and refine special education lesson plans as an instructional assistant

Graduate Assistant

Bellingham, WA, USA

WESTERN WASHINGTON UNIVERSITY: HUXLEY COLLEGE OF THE ENVIRONMENT

2013-08 - 2016-08

- Developed and published novel dendroecological research projects
- Scripted statistical methods for identifying complex ecological and climatological relationships
- Trained and led teams of research volunteers in the safe use of field and laboratory equipment
- Presented research findings at national conferences
- Created and maintained university GIS geodatabses and topologies
- Presided over and maintained the Huxley Tree Ring Laboratory

Research Engineer

Austin, TX, USA

THE UNIVERSITY OF TEXAS AT AUSTIN: TEXAS NATURAL SCIENCE CENTER

2013-04 - 2013-09

- Compiled, georeferences, and managed academic collections and geospatial databaes
- Contributed historial species range data to statewide virtual biodiversity museum
- Reconstructed historical biodata collections and events

Trail Management Intern

Angeles National Forest, CA, USA

STUDENT CONSERVATION ASSOCIATION

2013-01 - 2013-04

- Co-managed Trails Assessment and Conditions Survey (TrACS) team
- Conducted detailed survey of fire damage to public roads and trail systems
- Assisted in infrastructure restoration projects to maximise public access benefits
- Received national government-sponsored training in defensive driving

Laboratory Assistant

Austin, TX, USA

THE UNIVERSITY OF TEXAS AT AUSTIN: TEXAS NATURAL SCIENCE CENTER

2012-01 - 2013-01

- Catalogued, conserved, photographed, and archived acadmic fish and fossils collections
- Maintained and updated relational database management system for institution collections
- Trained volunteers and students in laboratory safety and inventory procedures

Laboratory Assistant

San Marcos, TX, USA

TEXAS STATE UNIVERSITY: DEPARTMENT OF GEOGRAPHY

2011-03 - 2012-12

- Captured and processed ichnological and palaeontological data using Structure from Motion
- Prepared vertebrate fossils for laboratory use and public display
- Established geology and palaeontology laboratories for the university
- Curated departmental fossils and rock collections
- Trained volunteers in laboratory procedures and sample preparation techniques
- Organised and led field exercises for sample collections and cleanings

Publications

1. O'Hara-Wild, M., & Hyndman, R. (2021). *Vitae: Curriculum vitae for r markdown*. `https://CRAN.R-project.org/package=vitae`

2. Müller, K., & Wickham, H. (2021). *Tibble: Simple data frames*. `https://CRAN.R-project.org/package=tibble`