David L. Nielsen

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EDUCATION

University of Washington, Seattle, Washington   Currently enrolled
- MS candidate in Computational Linguistics.
- Expanding my machine learning knowledge to include Natural Language Processing techniques such as text summarization, POS tagging, and word embeddings.

Reed College, Portland, Oregon   August 2008-May 2011
- B.A., Mathematics, GPA 3.48
- Senior thesis: *The Problem of Zarankiewicz* is a mathematical puzzle concerning the number of shared connections between two groups. Discovered and proved a new lower bound for certain cases of the problem.

WORK
EXPERIENCE

Tura.io, Portland, Oregon

Software Engineer   Sept 2017 to present
- Consulting as Principal – Data Engineering & Data Science for **CoreLogic**.
- Leading a team developing cutting-edge machine learning frameworks to implement predictive modeling as well as other domain-tailored ML tasks.
- Following agile software developing practices and developed primarily in PYTHON, SQL, APACHE BEAM and TENSORFLOW on GOOGLE CLOUD PLATFORM (GCS, DATAFLOW, BIGQUERY, CLOUDML, AIRFLOW).

Intelligent Systems Division, NASA Ames Research Center, California

Research Engineer, **MORi Associates, Inc.**   Feb 2013 to Oct 2016
- Collaborated with the Data Sciences group to discover, explain, and predict safety and operational incidents in aviation using data mining and machine learning techniques.
- Designed novel anomaly detection algorithms to discover and investigate landings at four of the largest US airports. These algorithms improved upon the state of the art machine learning techniques and the results were published in IEEE DIGITAL AVIONICS SYSTEMS CONFERENCES and 2016 WORLD CONGRESS ON COMPUTATIONAL INTELLIGENCE.
- Tools utilized included PYTHON scientific stack (NUMPY, SCIPY, SCIKIT-LEARN) in a LINUX environment with GIT for version control and SHELL SCRIPTS for data management on our local network.

**Department of Biomedical Engineering,
Oregon Health and Science University**, Portland, Oregon

Research Assistant   July 2011 to June 2012
- Collaborated with Dr. Todd Leen on perturbation methods for statistical analysis of neural modeling.
- These methods allowed us to approximate both online learning algorithms and electric pulses generated by fish with much higher confidence that before, leading to the publication of peer-reviewed journal articles.

References available upon request.