Daniel Wood
Data Scientist · Neuroscientist

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Skills

Techniques	*Machine Learning* (time-series, tree-based ensemble methods, regression and classification models, clustering), *dimensionality reduction* (t-SNE, PCA), *model explainability* (LIME, Shapley values), *NLP* (sentiment analysis, vector spaces, knowledge graphs, topic models), *statistics* (hypothesis testing, experimental design), *DSP* (FFT, wavelets)
Packages	SK-Learn, Pandas, Numpy, Selenium, BeautifulSoup, Statsmodels, Plotly, Seaborn, Dash, Streamlit, NLTK, SpaCy, pySpark
Programming	Python (5 yrs), MATLAB (10 yrs), HTML5, CSS, SQL, Linux Shell
DevOps/Cloud	Docker, Git, AWS, Heroku

Experience

Sharpest Minds   *Chicago, IL*
Data Science Fellow   *5/2020 - Present*
- Developed a python package and web app that provides decision support for diabetics. (https://github.com/danielkentwood/sugartime)
- Developed ETL pipeline for patient biodata from wearable devices (continuous glucose monitor and insulin pump).
- Developed custom multioutput autoregressive time-series model to forecast blood glucose levels.
- Collaborating with CTO at ProteinQure.

Exponent   *Chicago, IL*
Scientist   *3/2019 - 10/2020*
- Performed human factors consulting (litigation support, forensics, product safety/usability) for several Fortune 500 companies.
- Project management (budgeting, billing, quality control, data collection, coordinating client communication, project pacing, writing expert opinions). Managed 15 projects with team sizes between 4 to 12 consultants.
- Built a dashboard for tracking month-to-month employee performance company-wide.
- Developed python apps for automating critical tasks, resulting in up to 10X speedups in execution time and saving clients thousands of dollars.

Northwestern University   *Chicago, IL*
Postdoctoral Research Fellow   *1/2014 - 3/2019*
- Neural mechanisms of search behavior in monkeys and mice. Published 2 peer-reviewed articles. Received 2 grants ($150K in funding).
- Developed novel eye tracking rigs and experimental control applications (in Python & C++) for monkeys and mice.
- Wrote Python and MATLAB code to preprocess, analyze, model, and visualize insights from >3 TB of behavioral and neural spiking data. (https://github.com/danielkentwood/NERF).

Selected Projects

SugarTime
https://github.com/danielkentwood/sugartime
- *SugarTime* is a python package and web app that helps diabetics optimize insulin dosage to counteract a meal.

SearchMo
https://github.com/danielkentwood/SearchMoDB
- *SearchMo* is a Dash app that allows users to query the frequency of N-grams over time within a database of Mormon (LDS) periodicals.

Education

University of Western Ontario   *London, ON, CAN*
MS & PhD in Neuroscience   *9/2007 - 5/2009, 9/2009 - 12/2013*
- Visuomotor decision-making in humans. Published 12 peer-reviewed articles. Received 4 grants ($137K in funding).

Brigham Young University   *Provo, UT*
Honors BA in Philosophy (Minors in Logic, Music, and Psychology)   *9/2001 - 5/2006*