

Nathan Cornelius

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Skills

Python, SQL, MATLAB, C, C++, LaTeX, Pandas, Numpy, Scikit-learn, Matplotlib/Seaborn

Experience

October 2020 - November 2022

Verizon, Remote – *Data Scientist*

- Employed and maintained predictive classification models to forecast outage conditions in Wide Area Networks on a link-by-link fidelity and an hour-by-hour temporal resolution with 84% precision, allowing operations engineers to preemptively identify and diagnose degrading networks for dozens of enterprise clients.
- Supported network health maintenance efforts by creating diagnostic tools based on anomaly detection methods and time series forecasting models to alarm on problematic SLA metrics in network communication devices.
- Collaborated with network engineers to develop a rule-based algorithm to correlate and reduce thousands of automatically generated WAN alarms, enabling technicians to prioritize and troubleshoot the most root cause issues.

January 2020 - May 2020

Insight Data Science, San Francisco – *Data Scientist Fellow*

- Consulted for a San Francisco based SaaS company to construct a predictive random forest model from behavioral data that classified users in a free trial environment who converted to subscription customers with 88% precision.
- Leveraged scikit-learn, numpy, pandas and csv Python packages to outperform previously developed in-house heuristic models, enabling sales and marketing teams to increase free trial outreach efforts by 1.5x.

June 2018 - April 2019

ThoughtSpot Inc, Palo Alto – *Technical Product Marketing Manager*

- Served as the primary marketing link between the engineering and sales teams, empowering sales with product understanding and materials to showcase a deeply technical business intelligence suite to non-technical audiences.
- Analyzed large datasets using various statistical methods to find compelling trends and narratives for sales engineers to leverage in product demonstrations shown to hundreds of current and potential customers worldwide.
- Managed the creation and maintenance of a free trial experience used by thousands of trial signups worldwide.

March 2015 - February 2018

Infer Inc, Mountain View – *Senior Data Analyst*

- Built customized predictive models to enable prioritized sales team outreach using classification algorithms including Naive Bayes, Gradient Boosted Trees, Random Forest, and Logistic Regression.
- Used SQL and Python to analyze large datasets across various CRMs and derive insight into which algorithms and features best serve customer sales and marketing needs for over 100 customers.

Research

August 2007 - January 2014

Cornell University, Ithaca NY – *PhD Research (Thesis Research Advisor: Peter C. Doerschuk)*

- Developed image analysis software to determine blood flow speeds in cortical blood vessels imaged with novel microscopy techniques, achieving a tenfold increase in efficiency over previously used speed-calculation algorithms.
- Created a nonlinear time-series model describing electrical activity in a localized region of the brain and the ensuing increase in blood flow..
- Constructed a linear algebra based mathematical model used to predict time-varying blood flows in an entire large network of blood vessels based on experimental knowledge of blood flows in only a small subset of the network.

Education

August 2007 - January 2014

Cornell University, Ithaca NY – *PhD Biomedical Engineering*

October 2001 - June 2006

UCLA, Los Angeles CA – *BS Electrical Engineering, BA Economics*