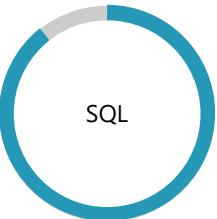
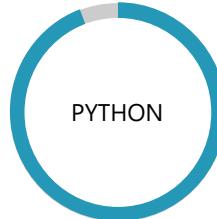
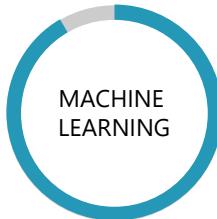


Aaron Soellinger

DATA SCIENTIST

AUTOMATING MACHINE LEARNING PIPELINES FOR ENHANCING HUMAN INTELLIGENCE



SUMMARY

- Advanced python programming skills.
- Strong SQL skills.
- *Towards Data Science* articles with some public code samples, written about machine learning experiments found here: <https://medium.com/@soellingeraj>. Production code and CI/CD experiment reproducibility code aspects available upon request.
- Worked with industrial SCADA data to predict wind turbine drivetrain faults. Led the team building the data platform (in python/bash and elasticsearch). We became deeply familiar with grid events, especially if they impacted the mechanical function of the wind turbines.
- Intimately familiar with the way that wind turbines produce energy and how that looks in data, and alongside weather data.
- Skilled in time series forecasting for electricity production.
- Understanding of electricity markets. Have completed demand studies e.g. base vs peak generators, supply curve auction mechanisms (spot and forward auction mechanisms), and some algorithms for doing infrastructure planning optimization.

10+
Years within
Data Science

EDUCATION

Economic Systems Design
Chapman University

Applied Math
Indiana University

B.S. Economics
Purdue University

PROFESSIONAL EXPERIENCE

CONSULTING PROJECTS, Data Science, 2020-2021

- As a Data Scientist, working on a project (microprediction.org) focused on step-ahead time series forecasting algorithms, looking at electricity production among other variables as the way of comparing the algorithms features and effectiveness. ([timemachines](https://timemachines.com))

SENTIENT SCIENCE, Lead Data Scientist, 2015-2020

- Served as the lead algorithm developer for Machine Learning Damage Model program using data from wind turbine SCADA systems to correctly predict more than 30 unplanned mechanical faults valued at \$30-300k each.
- Forward-deployed technical lead in Navarre Spain, embedded with Sentient's largest customer generating \$5M in revenue over 4 years.
- Product owner and lead data engineer for Data Engineering Platform for automated ingestion and exploration of structured SCADA data for use by analysts in developing remaining useful life models.

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- Lead algorithm developer for Bill of Materials program to predict unknown subcomponent make/models used in 7 customer pilot initiatives, including the winning project for a key long-term customer.
- Lead author for \$1.5M SBIR Phase 2 and Lead Investigator on Phase 1 Program Report: *Remaining Useful Life of Additively Manufactured Parts in Economic Lifecycle Cost*.
- Product manager and algorithm developer overseeing Pythian machine learning consulting team tasked with developing a new machine learning model for mechanical fault detection.
- Lead process designer for Unstructured Data Ingest Program including operator procedure and data taxonomy guiding scalable ingestion of key dependent variables from field service reports.
- Lead algorithm developer for Unstructured Data Cleansing program used to validate key dependent variables used to train and validate supervised models at production scale.

WOOP FITNESS, Consulting Data Scientist, 2019

- Reporting directly to the CEO, led development of investor demo applying pose-estimation deep learning model in a real-time mobile app and motion analytics.

INDUSTRIAL INTERNET CONSORTIUM, Member of the Technical Team, 2014-2015

- Lead implementations for internal software to facilitate and organize technical working groups.
- Martin, R. and Soellinger, A., [The Emerging IIC Verticals Taxonomy Landscape](#), The Industrial Internet Consortium Journal of Innovation. June 2016.

CHAPMAN UNIVERSITY, Contracted Researcher, 2013-2014

- Co-developed investment thesis modeling the effects of exchange rate fluctuations on the real economy and firm performance; utilized the models to trade in live equity and equity options markets.
- Quantitative analysis joining disparate time-series data sources including firm financial reports, price data from Bloomberg and qualitative data mined from other sources.
- Software engineer for two economic games written in C#/.NET designed by experimental economics researchers to test fundamental economic theory.