WENCAO YANG

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EDUCATION

Indiana University at Bloomington *Aug 2013 - Aug 2019*
Ph.D. in Physics (GPA: 3.7/4)

Xiamen University *Sep 2009 - Jun 2013*
B.S. in Physics (GPA: 3.7/4)

Coursework: Introduction to Statistics, Applied Linear Regression, Time Series Analysis, Machine Learning Foundations: A Case Study Approach, Algorithms

SKILLS

Languages	Python, SQL, Java, R
Tools	NumPy, SciPy, Pandas, Matplotlib, Scikit-learn, NLTK, SpaCy, Gensim, NetworkX, Keras, FastAPI, Flask, Docker, Airflow, Git, AWS (S3, RDS, EC2)
Knowledge	Statistics, AB Test, Machine Learning, Neural Network, NLP, CV with Topological Data Analysis, Database, Object-Oriented Programming.

WORK EXPERIENCE

Strike Social Oct 2019 - present
Data Scientist, Chicago, IL

- Built recommendation and optimization engines for advertisement campaigns, including building similarity matrix, training gradient boosting regression models for campaign performance, creating budget engines for budget distribution among different audience groups and across different platforms, and implementing optimization of pacing and bidding for advertisement campaigns.
- Categorized, filtered and ranked YouTube channels with various NLP machine learning models (tf-idf, word2vec, doc2vec, BERT, Sentence-BERT, etc) based on processed channel and video titles, descriptions and keywords. Converted a text classification task to a sentence similarity task.
- Built data warehouse/ETL pipelines and analyzed key metric data from YouTube/Facebook/... platforms and did data visualization with SQL, built customized dashboards for internal and external clients. Built Flask demo to demonstrate data insight result.

Indiana University Aug 2013 - Aug 2019
Research Assistant, Bloomington, IN

- Analyzed polarized neutron spin echo scattering data and 2D/3D material characterization data. Fitted and visualized experimental data like nonlinear regression for certain spectrum and reciprocal space mapping for X-ray diffraction. Processed and analyzed low temperature transport measurement results.
- Published 10+ peer-reviewed publications with 160+ citations.

SELECTED PROJECTS

Web Traffic Time Series Forecasting Aug 2017 - Oct 2017

- A Kaggle competition to predict Wikipedia pages visiting numbers with historical data. Using a 'median of medians model' with a carefully picked list of sliding time windows to have an LSTM-like effect, achieving top 10% (Bronze medal) in the leaderboard.

Network Community Detection Oct 2016 - Jun 2017

- A research project to test state-of-art network (social graph clustering) community detection algorithm. First implemented Girvan–Newman algorithm with networkx and then tested stochastic block model with real social network data by inspecting the dependence of the degree of vertices inside a single community versus dependence of global degree of vertices.