

Jake Skinner

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EDUCATION

The University of Chicago | MS in Computer Science

Exp. April 2021

Vanderbilt University | BS in Human and Organizational Development

May 2014

TECHNICAL SKILLS

Programming Languages: Python, Go, Java, C++, SQL, Swift/UI, Vertica/Hive

Analytical Skills: Machine Learning, RNNs, XGBoost, bagging, support vector machines, object oriented design patterns, hierarchical cluster analysis, logistic regression, NLP (extractive and abstractive), parallel optimization, large-scale data processing and distributed systems

Tools and Libraries: Jupyter, Git, Postgres, OpenCV, NumPy, Keras, Tensorflow, Plotly, Pandas, Sklearn, PgAdmin, Docker, Apache Airflow

PROJECT EXPERIENCE

Parallel and Distributed Deep Learning

Sep. - Dec. 2020

- Designed and built a knowledge engineering program in Go to train generalized neural networks in parallel
- Wrote an algorithm to schedule and perform mini-batch and stochastic gradient descent in distributed and semi-asynchronous environments, achieving a 3x speedup with no decline in validation performance

Abstractive NLP with Deep Learning

Mar. - May 2020

- Built a contextual text summarization service that summarized long and short form news articles into condensed human readable paragraphs
- Designed and built a sequence to sequence deep learning model for abstractive text summarization, employing an LSTM based attentive encoder-decoder architecture to summarize news articles without extraction
- Utilized Keras and Tensorflow (GPU assisted) to clean, parse, and tokenize 50K news articles and generate customized word embeddings to be used for cosine comparisons and the generation of context based summaries

PROFESSIONAL EXPERIENCE

University of Chicago: Data Station Project

Jan. 2021 - Present

Graduate Researcher: Machine Learning | Chicago, IL

- Currently developing a suite of analyzers in Java/Python to detect and classify PII data across unstructured heterogeneous datasets, used for ingestion into meta-data models and large scale data profiling algorithms

MedEngine

May - Sep. 2020

Data Science Intern | Berlin, DE (Remote)

- Developed a companion Apple Watch app (Swift and JavaScript) to monitor, track, and quantify tremors for Parkinson's patients using Apple's proprietary Movement Disorder API and native accelerometer readings
- Constructed a scalable data pipeline to safely and securely capture and transfer health data from sensor and local devices to Google Firebase

Uber Technologies: UberEats

Nov. 2017 - May 2019

Sr. Manager: Marketplace Analytics | San Francisco, CA

- Designed and deployed an ensemble learning system in python to construct and optimize hex-based delivery zones for 220 markets, achieving Pareto improvements in three consecutive deployments and realizing 3.5% growth and over \$20 million in incremental revenue
- Constructed a customized grid-search algorithm to cross validated and tune model hyperparameters, preventing redundant simulations on a per market basis and reducing total model runtime by 75%
- Wrote and productized a multivariate log-linear regression travel time model that utilized Uber's internal routing and traffic API to predict suboptimal restaurant and delivery locations pairings to prevent degraded food quality

Operations Manager

Dec. 2016 - Nov. 2017

- Launched and scaled UberEats in midwestern markets growing revenue from \$0 to > \$100M in 1.5 years
- Built the first a courier supply balancing model in SQL/python to quantify imbalances in marketplace efficiency and predict changes in demand and supply, model was productized and scaled across all US markets
- Developed and implemented time and geo-based dispatch and incentive setting strategy for both driver and bicycle partners across Midwest markets to drive improvements in network efficiency

Accenture Consulting

Aug. 2014 - Dec. 2016

Consultant | Chicago, IL

- Formulated and constructed a Network Optimization model to provide a terminal, production sourcing, and mode optimization across 3 business units, 10 product types, and 54 terminals, identifying over \$15 million in immediate savings

PERSONAL INTERESTS

Coffee roasting, homelab projects, running, cooking/baking, political history and organizing, furniture restoration, and art history