

SOLOMON FUNG

fung.sol@gmail.com, 6504409026, 1 Daniel Burnham Ct #802, San Francisco CA 94109. [linkedin.com/in/solfung](https://www.linkedin.com/in/solfung)

Seeking **Machine Learning Engineer** or **Data Scientist** positions at Staff / Senior level

Masters degree + 9 years software engineering experience, 6 years in machine learning, data science & NLP

Expertise: Python, R, SQL, Pytorch, Tensorflow, scikit-learn; text, audio & customer corpora. github.com/solfung

Education

M.S. in Management Science & Engineering – Stanford University 2014

- Operations research, optimization

Post-bachelor certificate in Business – Columbia University 2012

B.Eng. in Biomedical & Electrical Engineering with **Minor** in Computer Science – Carleton University 2011

- Digital signal processing, embedded software design

Experience

Senior Machine Learning Engineer – 8x8 2018-04 to now

- Technical lead on multiple projects; oversee 1-2 junior engineers, coordinate with other dept teams and vendors; translate applied research to new tools and features; analyze and present findings & demos to VPs
- Speech recognition: built, trained, deployed Pytorch models with Docker, gRPC, GPU; implemented text normalization and inference performance & cost tuning; construct internal datasets and built pipelines to process audio, evaluate accuracy & fine-tune; achieved 20% word error reduction beating Google and AWS recognition services and 25x cost improvement over current vendor expenses
- NLP: built streaming NLP pipeline on Google Cloud and Spacy on customer conversation dialog and surveys; flagged customers are diverted to intervention team leading to 15% reduction in quarterly churn; develop and assess entity recognition for automated privacy; train and fine-tune language models using BERT and KenLM; topic modeling on support tickets and account data with LDA to analyze customer journeys; build sentiment classifiers & merge results from API vendors; featurization of accounts including custom industry classification
- Statistical analysis: churn & downgrade risk analysis and regression in R; formulate & test lifetime value models; infer customer churn impact from A/B experiments and observational studies; crafted slides and presented findings to C-level and VP execs – presented to entire company for internal demo + Q&A presentation
- Marketing analytics: ETL, SQL, REST API pipelines for lead ranking & analytics on data warehouse & Airflow

Data Science Engineer – MarianalQ (SaaS startup) 2014-11 to 2018-03

- ML: built, trained and deployed convolutional and recurrent networks with Tensorflow and Keras on AWS; tuned clustering algorithms in scikit-learn and Elki for recommendation retrieval
- NLP: preprocessed text and generated custom word embeddings with Cython algorithmic modifications on word2vec; applied topic modeling and sentiment analysis on social and business data with Gensim, NLTK
- Data science: engineered features, distance metrics and built dimensionality reduction pipelines using PCA & t-SNE; developed visualizations for analysis and debugging of B2B buyer personas on matplotlib and D3.js
- Full-stack: developed widgets on Javascript Angular and Django API integration for front-end configuration and data querying of data sources from MongoDB, Elasticsearch and S3

Digital Hardware Engineer – Ciena 2011-05 to 2013-09

- Hardware: designed and programmed gigabit data interfaces and digital control logic using Verilog and VHDL; network configuration and benchtop testing with oscilloscope and logic analyzer
- Software: developed C++ application & GUI for data collection, analytics and Linux CLI for equipment testing

Patents & Publications

Patent Appl. 20180322537 – System for Determination of Potential Customer Status Pending

Patent 10860803 – System for Semantic Determination of Job Titles 2020

Blog article – Going deeper with recurrent networks: Sequence to Bag of Words Model 2017

kdnuggets.com/2017/08/deeper-recurrent-networks-sequence-bag-words-model.html

Conference article – Using Distmesh as a mesh generating tool for EIT (J. Phys.: Conf. Ser. 224 012149) 2010

iopscience.iop.org/article/10.1088/1742-6596/224/1/012149/