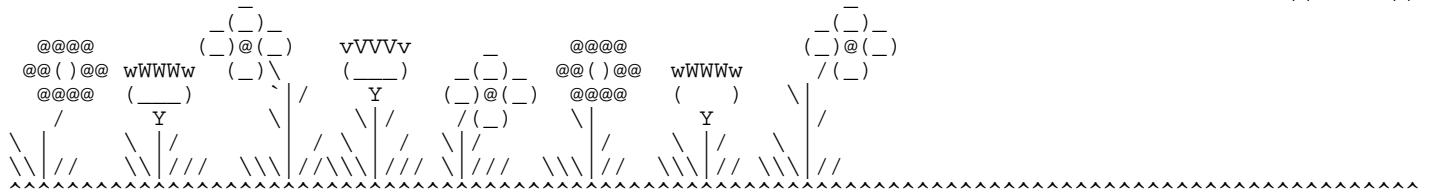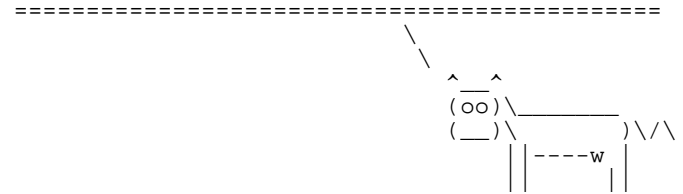# Nathaniel Joselson

I am an internationally trained mathematician, programmer, techno optimist, command line enthusiast, Chomskian influenced natural language communicator and multi-modal ML model trainer. I like hard questions, theoretical discussions and love investigating tricky problems together with motivated, talented and diverse technologists that share my desire to constantly learn and improve. I truly think we can make the world a better place through technology as long as we embrace diversity of thought and aren't scared of admitting when we are wrong (or listening to our users). I love testing (especially ML model output) so I always TDD, and I like playing in the interface between the digital and physical world. Looking forward to working with you, or just discussing whether P equals NP!

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lanugages: English, Swedish

Work Experience

Data Scientist - Corti   August 2021-Present
AI driven emergency medical consulation analysis, disease detection and automated triage
~ Enabled automated tracking of conversation quality for call taker training and medical quality assurance of 1M emergency medical calls per year through designing and implementing an NLP search and ingestion API for call text on top of Elasticsearch.
~ Identified model drift in ASR model and several medical classification models through designing and implementing metrics and tests for monitoring ML models and search services.
~ Accelerated customer onboarding by 20x through redesigning and reimplementing our ingestion and integration service for customer Audio and medical metadata.

Data Scientist - Min Doktor Healthcare AB   August 2018-August 2021
Text and image-based automated triage and treatment for low acuity primary care.
~ Enabled modern Data Science workflows through designing and implementing a modern data warehouse with automated, tested ETL pipelines, custom encryption for GDPR and HIPAA compliance, and domain modelled data with visualization in Looker.
~ Enhanced patient experience by building, evaluating and monitoring NLP classification models for symptom search and improved marketing responsivenes for patient Churn with statistical predictive models such as customer Lifetime Value.

Numerical Optimization Researcher- OLSPS Consultants   January 2015-October 2016
Fisheries modeling consultancy working with governments to allocate allowable catch
~ Sped up model run time by 10x through rewriting optimization procedures for the allowable catch model with a modern optimization package on top of C++ code.

Academics

Msc. in Mathematical Statistics   August 2017-August 2019
Lund Univeristy (Sweden) Department of Mathematics
~ Thesis: Emotion Classification with Natural Language Processing
~ Advisor: Pierre Nugues, Associate Professor Dept. of Computer Science Lund University

Bsc. Honours in Statistical Sciences   January 2013-December 2016
University of Cape Town (South Africa) Department of Statistical Sciences
~ Thesis: Uses of Principal Components in Generalized Linear Modelling
~ 3rd Place Winner of the South African Statistical Association Honours Thesis competition

Skills

Programming Languages
Python (Advanced), SQL (Intermediate), Bash (Intermediate), R (Intermediate), C++ (Basic)

Tools
Deployment (Docker, Kubernetes), Cloud (Azure, Google Cloud, Heroku), SQL (Postgres, BigQuery, Mssql), NoSQL (MongoDB, Elasticsearch), Source Control (Git), Acceleration (Cuda)

Skills
Testing (pytest), Machine Learning (pytorch, tensorflow, scikit-learn, xgboost, huggingface), NLP (spacy, nltk, lucene, flair), Mathematical Programming (scipy, numpy), Data Analysis (pandas), Web Development (FastApi, Streamlit, Django), Data Visualization (Matplotlib, Seaborn), Data Modeling (DBT, Great Expectations), Workflow Management (Airflow, Prefect)