Siddharth Sachdeva

https://siddsach.github.io/

Code Sample : https://github.com/siddsach/netzero

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EDUCATION

University of Chicago
Chicago, IL

Bachelors in Statistics; GPA: 3.62
Sept 2014 – June 2018

- Academic Honors
- Chicago Booth Social New Venture Challenge Grant: $20k
- Polsky Accelerator Grant: $10k

WORK EXPERIENCE

Machine Learning Engineer
November 2019 – June 2021

Aquabyte
San Francisco, CA

I worked on our lice product, which reports pest levels in fish farms to the government using computer vision applied to underwater cameras

- Wrote application for approval from Norway government to replace manual counting with automated reporting of pest levels, leading to new government policy to allow automated lice count reporting
- Led annotation team to build dataset, trained models, and deployed pytorch object detection, classification pipeline for fish and lice, processing 6 million images/day, reducing costs by 40X.
- Reviewed the literature on population ecology time-series modeling and implemented state of the art statistical methods for forecasting sea lice outbreaks, documentation used in application to government
- Conducted and documented experiments diagnosing performance issues, driving 10x increase in KPI

Machine Learning Engineer
August 2018 – November 2019

Roam Analytics
San Mateo, CA

Worked under Stanford Professor Christopher Potts building NLP tools for healthcare companies in telemedicine, pharmacovigilance, and insurance

- SELECTED PROJECT: Using message routing to save One Medical doctors time in virtual care
  - Built an AI decision support tool for triaging patient messages. Achieved 84 pct accuracy (evaluated to be within 0.1 % of human level), triaging 30k messages a week from real patients to real doctors.
  - Collaborated with clinical domain experts to define label schema, write annotation guide, curate dataset, train annotators, and evaluate data quality for dataset used to train LSTM-CRF
  - Worked with executives to define objectives, identify requirements, and present results. Led to conversion of 200K pilot as well as generating interest for new projects.
- SELECTED PROJECT: Building tools for Parexel's pharmacovigilance team
  - Built search tool using elastic search, word vector similarity, and drug lexicons
  - Worked with customers, PM, and designer to prototype and iterate on reviewer product, driving demonstrated improvement in ADE reviewer speed by 5X, leading to Roam's acquisition

PROJECTS

Research Assistant
March 2021 –

Data-driven Envirolab, Yale-NUS/UNC Chapel Hill
Remote

Worked under Dr. Angel Hsu doing computational policy analysis of cities

- Performed preprocessing and text analysis of 318 cities' PDF climate plans from around the world.
- Found that specificity, governance, sources, and inclusiveness are topics associated with more ambitious climate plans, by applying logistic regression to climate plan texts and human labels.
- Showed that climate strategies can be described by 2 factors: urban infrastructure, ecological factors, using word2vec based methodology for mining emissions source mentions
- Used text feature similarity to show that regions + networks (e.g. C40 cities) shape climate plans

PUBLICATIONS

1. **Sachdeva**, S. *et al.* What determines net-zero ambition? An automated approach to analyzing more than 300 subnational climate strategies. *In Preparation* (2021).

Skills

Python
 -PyTorch
 -Tensorflow
 -Numpy
 -Scipy
 -Seaborn
 -Dash
 -Pandas
 -Flask
Bash
PostgreSQL
R
AWS
Javascript
Docker

Relevant Coursework

Nonparametric Inference
Multivariate Data Analysis using Matrix Decomposition
Deep Learning
Machine Learning
Numerical Linear Algebra
Statistical Theory and Methods
Multivariate Calculus
Cluster Computing and Hadoop
Computer Science W/ Applications
Applied Regression Analysis
Microeconomics
Advanced Applied Price Theory