Siddharth Sachdeva

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EDUCATION

University of Chicago — Chicago, IL
Bachelors in Statistics; GPA: 3.62 — Sept 2014 – June 2018

WORK EXPERIENCE

Machine Learning Engineer — November 2019 – June 2021
Aquabyte — San Francisco, CA

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

- **Built end-to-end PyTorch object detection, image classification pipeline** for fish and lice detection, processing 6 million images/day, reducing costs by 40X, detecting lice with 93 % F1 score
- **Wrote technical documentation in application for approval from government** to replace manual method with automated reporting of pest levels changing policy to allow automated lice count reporting
- **Reproduced time-series regression models from ecology papers** for forecasting sea lice outbreaks
- **Documented experiments diagnosing performance issues**, driving 10x increase in KPI
- **Remotely led Indian annotation team to annotate high-quality labeled data** for training models

Machine Learning Engineer — August 2018 – November 2019
Roam Analytics — San Mateo, CA

Worked under Stanford Professor Christopher Potts building (Natural Language Processing) NLP tools for healthcare companies in telemedicine, pharmacovigilance, and insurance

- SELECTED PROJECT: **Created a NLP decision support tool for triaging patient messages.**
  - **Built LSTM-CRF for NER in tensorflow, achieved 84 % accuracy** (evaluated to be within 0.1 % of human level), triaging 30k messages a week from patients to doctors.
  - **Developed metrics and visualization of accuracy and impact evaluation of our system.** Demonstrated 56% percent reduction in doctors' message load, saving $1.8million/year
  - Worked with clinical stakeholders to define objectives, KPIs, and present results. Led to conversion of 200K pilot as well as generating interest for new projects.
  - **Built datasets in collaboration with clinical SMEs** by defining label schema, writing annotation guide, curating dataset, training annotators, and iteratively evaluating data quality to correct issues
- SELECTED PROJECT: **Building tools for Parexel's pharmacovigilance team**
  - Built interactive search tool using elastic search, word vector similarity, and drug lexicons
  - Improved adverse drug event reviewer time 5X, **project led to Roam's acquisition**

Impact Investing Intern — June 2015 – September 2015
Aavishkar — Mumbai, India

India's largest Impact Investing VC fund, with $800 million assets under management, focused on investing in social ventures in rural India

- SELECTED PROJECT: Triton Foodworks, India's first commercial-scale hydroponic produce company
  - Delivered pitch to Aavishkaar's investment committee leading to 7-figure investment.
  - Led ground research by speaking to vegetable sellers and local Supermarket managers to understand where they source their produce, who buys what, and how they make decisions.
  - Completed on-site due diligence process at the farms, learning how the farmers acquired their knowledge, and what operational economics were like.
  - Conducted intensive deal sourcing, finding and calling dozens of Indian startups to learn about their business models, and screen potential investment opportunities leading to Triton Foods

PUBLICATIONS

1. **Sachdeva**, **S.** *et al.* How are cities pledging net zero? A computational approach to analyzing subnational climate strategies. *In Review* (2021).

Skills

Python Data Science Stack
 -Geopandas
 -PyTorch
 -Tensorflow
 -Scipy
 -Statsmodels
 -Sklearn
 -Seaborn
 -Dash
 -Pandas
 -Flask
Google Earth Engine
Bash
PostgreSQL
R
AWS
Javascript
Docker

Relevant Coursework

Computer Science W/ Applications
Applied Regression Analysis
Microeconomics
Advanced Applied Price Theory
Multivariate Data Analysis using Matrix Decomposition
Deep Learning
Machine Learning
Numerical Linear Algebra
Statistical Theory and Methods
Non-parametric Inference
Multivariate Calculus
Cluster Computing and Hadoop
Economic Development of China
Politics of China

Languages

Chinese
Hindi

Volunteer Experience

Sunrise Movement - youth climate advocacy group
YIMBY Action - pro-housing coalition
Civic Knowledge Project - Humanities mentorship program for kids

Awards

Academic Honors
Chicago Booth Social New Venture Challenge Grant: $20k
Polsky Accelerator Grant: $20k
Stanford BASES Finalist