

Siddharth Sachdeva

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EDUCATION

Stanford University

PhD in Environment and Resources

Stanford, CA

Sept 2022 - June 2027

University of Chicago

Bachelors in Statistics; GPA: 3.62

Chicago, IL

Sept 2014 – June 2018

WORK EXPERIENCE

Machine Learning Engineer

[Aquabyte](#)

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

November 2019 – June 2021

San Francisco, CA

- **Developed deep learning 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 annotation team to annotate high-quality labeled data** for training models

Machine Learning Engineer

[Roam Analytics](#)

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

August 2018 – November 2019

San Mateo, CA

- **SELECTED PROJECT: Created a NLP decision support tool for triaging patient messages.**
 - * Developed LSTM-CRF for entity tagging in tensorflow, **achieved 84 % accuracy (evaluated to be within 0.1 % of human level), triaging 30k messages a week from patients to doctors.**
 - * Conducted and presented evaluation of our system using metrics and data visualizations **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 nurses** 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

[Aavishkar](#)

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

June 2015 – September 2015

Mumbai, India

- **Delivered pitch to investment committee leading to 7-figure investment** in Triton Foodworks, India's first commercial-scale hydroponic produce company
- Led market data collection by speaking to vegetable sellers and local supermarket managers

PUBLICATIONS

1. **Sachdeva, S.** *et al.* A computational approach to analyzing climate strategies of cities pledging net zero. *Nature Urban Sustainability*. <https://www.nature.com/articles/s42949-022-00065-x> (2021).

RELEVANT COURSEWORK

Financial Accounting
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

SKILLS

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

LANGUAGES

Chinese
Hindi

AWARDS

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