

# SIDDHARTHA THOTA

Machine Learning Engineer

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## OBJECTIVE

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Adaptable, passionate professional with over 3 years of proven experience deploying data science solutions to production. Aiming to learn fast while building elegant, maintainable products at my next job as a machine learning engineer.

## EXPERIENCE

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### **StackAdapt**

*Data Engineer*

*Apr 2019 - Dec 2019*

*Toronto, ON*

- Built demographic distribution reporting for ad campaigns using bayesian inference.
- Analyzed and eliminated mathematical inconsistencies in probabilistic data of user profiles in a distributed, billion-scale data warehouse using Spark in Scala.
- Developed data pipeline in Golang to write real-time, distributed data into Aerospike, then into a data lake, processed and analysed using Spark.

### **ROSS Intelligence Inc.**

*Machine Intelligence Engineer Intern*

*May 2018 - Dec 2018*

*Toronto, ON*

- Built novel query and case passage entailment detection with deep learning (attention-based LSTM).
- Explored a case annotation method using citation contexts with deep learning (PyTorch).
- Set up deep learning pipelines, deployed models-as-a-Service on AWS using Docker, EC2, Airflow.
- Built fast, reliable cached snippet highlighting for 14m casetexts (React, Scala, MongoDB on AWS).
- Improved user workflow and increased user retention with well-recognized hackday projects, using Chrome Extensions and React.

### **Adobe Systems Inc.**

*Member of Technical Staff - II*

*Jan 2016 - Aug 2017*

*Bangalore, India*

- Built v0.1 of the business unit's ML-as-a-service architecture for data preparation, model deployment and scoring (Azure, Docker with support for Python and Scala models).
- Developed a ML platform with Airflow on Mesos to deploy deep learning and SparkML models.
- Built UI to set up training, validation and deployment lifecycle of these models and provided visualization of their performance.
- Built framework to manage deployment of trained models and automatically generated inference APIs for use by dev teams.

### **Adobe Systems Inc.**

*Member of Technical Staff - I*

*June 2014 - Dec 2015*

*Bangalore, India*

- Built a platform for digital marketing clients to optimize spends on multiple channels, supporting multiple, parallel campaigns, environment variables and revenue prediction.
- Overhauled the Marketing Mix Model and improved the optimizer performance 250x by optimizing data reads and storage ops.
- Cut UI response times 10x in report generation and caching using NumPy and Elasticache.
- Built ETL pipelines importing GBs of raw client data into data warehouse with schema-on-write.

## EDUCATION

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### University of Toronto, Canada

*Sept 2017 - Dec 2018*

MSc. in Applied Computing, GPA 3.925/4

Research projects:

- Pose-guided CycleGAN for Image to Image translation
- 8-month Machine Learning Engineer intern at ROSS Intelligence
- Sidewalk terrain estimation by clustering sensor data to assist wheelchair users
- Scheduling algorithms for applications on heterogenous multi-tier clouds

### National Institute of Technology Karnataka, India

*July 2010 - March 2014*

BTech. in Information Technology, GPA 8.47/10

Research projects:

- Identifying ragas (musical modes in Indian classical music) using HMMs

## TECHNICAL STRENGTHS

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### Computer Languages

Golang, Python, Scala, JS (React, etc)

### ML & Data Science

PyTorch, scikit-learn, Spark-MLLib, Pandas, TensorFlow

### Frameworks

Spark, Docker, AWS/Azure, MongoDB, Aerospike etc.

### Tools

Vim, git, linux, shell