

# Evan Casey

Aspiring artificial intelligence researcher  
New York, NY

ev@ancasey.com  
<http://www.ev.ancasey.com/>

## Education

B.A. Mathematics, Economics, minor in Computer Science

**Claremont McKenna College**

2010–2014

- Selected coursework: Machine Learning, Real Analysis, Complex Analysis, Probability Theory, Statistical Inference, Differential Equations, Discrete Mathematics, Data Structures & Algorithms

## Experience

**Software Engineer (part-time)** – Narrative I/O

July 2016 - present

- Architected and implemented the ETL pipeline that fuels all Redshift-sourced analytics over heterogeneous location and impression data generated from Narrative's real-time data exchange.
- Tech used: Spark, Redshift, Parquet, AWS.

**Sabbatical** – Recurse Center

March 2016 - June 2016

- Self-directed research in machine learning, neural networks, and reinforcement learning.

**Software Engineer** – Tapad (acquired by Telenor in Feb. 2016)

May 2014 - March 2016

- Developed and maintained components of the petabyte-scale data infrastructure powering Tapad's real-time ad bidding systems and the Device Graph, a graph based representation of device ownership that uses a probabilistic model to infer the relationship between devices.
- Designed and authored an end-to-end ad inventory forecasting system that summarizes billions of events daily using Elasticsearch.
- Prototyped and benchmarked several large-scale analytic data stores (Spark-sql, Impala, Druid) as part of project to improve access to unstructured data stored in HDFS.
- Tech used: Scala, Spark/Hadoop, Kafka, Zookeeper

**Software Engineering Intern** – One Kings Lane

Summer 2013

- Prototyped a product recommendation service based on multi-armed bandits.
- Built Babar with one other intern, an A/B testing framework using Ruby on Rails.

## Achievements

Outstanding thesis award – Mathematics and Computer Science

2014

HackNY Fellowship – Summer internship program	2014
Finalist – Greylock Hackfest	2013

## Talks

Deep Reinforcement Learning with Policy Optimization – New York Times Research	2016
Introduction to Neural Networks with Tensorflow – Recurse Center Workshop	2016
Scalable Machine Learning with Apache Spark – HackNY masters series	2015

## Publications

### UNDERGRADUATE THESIS

Scalable Collaborative Filtering Recommendation Algorithms on Apache Spark Evan Casey, Deanna Needell	2014
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## Software

1. demeter: A library for scalable deep reinforcement learning in Tensorflow. 2016
  - Core capabilities include robust, extensible implementations of REINFORCE, GAE, TRPO, and A3C and utilities to deploy these algorithms on OpenAI Gym and Universe.
2. scala-nn: A lightweight neural network framework in Scala 2016
3. bandit-http-server: A redis-backed HTTP server for multi-armed bandit algorithms 2013

## Teaching

1. Teaching Assistant | Claremont McKenna College 2012  
MATH 152: Statistical Inference

## Relevant Skills

### Programming Languages

- Scala, Python, SQL, Javascript

### Systems and Tools

- Tensorflow, Spark, Hadoop, Kafka, Elasticsearch, Docker

## Other

I organize Data Science Fridays, a machine learning reading group that meets weekly at the Recurse Center. In my free time, I like to skateboard and take photographs. In high school, I raised \$875,000 in grant money for a skate park in my hometown and once lived in Mongolia for 3 months.