

# Sinclair Target

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Backend Developer and Data Engineer

## PROFESSIONAL EXPERIENCE

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- **MIT Media Lab** Center for Constructive Communication (formerly Lab for Social Machines) Cambridge, MA  
*Research Software Engineer* 2020 – 2022
  - Wrote a command-line tool that used unsupervised learning techniques to create clusters of Twitter users with similar interests from the Twitter follow graph. Scaled up this tool to handle over a billion input follow relationships by using Dask, an open-source Python framework for distributed parallel computing. Contributed a performance improvement to Dask after noticing a severe memory consumption issue in the framework.
  - Built a semi-realtime data pipeline that pulls every public post and comment to Reddit on a five-day delay. Made this large dataset (essentially a mirror of all of Reddit!) easy for grad students to query via Amazon Athena.
  - Built a data pipeline configurable via a Flask-based web app for fetching Twitter user data on a regular schedule.
  - Took the lead in standing up a Dockerized Prometheus instance to monitor both user-facing web apps and data pipelines, a first for our engineering team (we previously had no metrics-based monitoring).
  - Collaborated with a designer to create several interactive data visualizations using D3.js. Embedded these visualizations in a React application.
- **City of Boston** Boston, MA  
*Data Engineering Summer Fellow, Data Analytics Team* Summer 2019
  - Created an interactive visualization of delays on Boston-area bus routes that was used by the Transportation Department to calibrate traffic signal timing. The visualization was backed by a geospatial data pipeline that made heavy use of GeoPandas (a Python library) and PostGIS (a geospatial extension to Postgres).
- **Breaking Ground** (Affordable Housing Nonprofit) New York City, NY  
*Application Developer, Data Services Department* 2017 – 2018
  - Led development of two new ASP.NET Core web applications that replaced hard-to-use and hard-to-maintain Access databases. Met frequently with users to understand existing workflows and practice user-centered design.
- **Playdots Inc.** (Mobile Gaming Startup) New York City, NY  
*Full-stack Engineer, Game Services Team* 2015 – 2017
  - Led development of the Ruby-on-Rails-based backend for the studio's first game with competitive multiplayer.
  - Optimized backend systems for *Two Dots*, a Webby-award-winning game with a million daily users. Drastically reduced average response times by eliminating inefficient Ruby code and rewriting long-running queries.
  - Managed RDS instances, EC2 instances, Redis clusters, and DNS configuration in Amazon Web Services. Wrote Fabric deployment scripts and Puppet provisioning manifests. Taught other engineers how to deploy their code.

## EDUCATION

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- **University of Chicago, Harris School of Public Policy** Chicago, IL  
*MSc in Computational Analysis and Public Policy* 2018 – 2020
- **Columbia University** New York City, NY  
*BA in Computer Science* 2012 – 2015

## TECHNICAL SKILLS

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- Web application and REST API development using the main popular frameworks in **Ruby**, **Python**, and **C#**
- Statistical analysis and data cleaning/transformation using **Python**, **Pandas**, **R**, **ggplot**, **PostGIS**, and **Dask**
- Frontend development and data visualization using **HTML/CSS**, **JavaScript**, **React**, and **D3.js**
- Cloud infrastructure and dev ops using **AWS**, **Docker**, **Fabric**, and **Ubuntu Linux**

## BLOG

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- **Two-Bit History** ([twobithistory.org](http://twobithistory.org))  
My blog about the history of computing. My history of the RSS standard was published by *VICE News* and an article I wrote about the DOOM rendering engine was published by *Ars Technica*.