

EDUCATION

Stanford University

September 2014 — August 2016

M.S. Computer Science

Primary Depth: Artificial Intelligence (AI)

Secondary Depth: Human-Computer Interaction (HCI)

Rice University

August 2010 — May 2013

B.S. Physics

B.A. Mathematics

Minor: Computational and Applied Mathematics

INDUSTRY EXPERIENCE

Robinhood

Software Engineer

July 2016 — Present

Python

- Automating the processing and handling of corporate actions, particularly instrument reorgs

Accompany

Software Engineer Intern

June 2015 — September 2015

Ruby/Rails, SQL

- Built an end-to-end pipeline from scratch for automatically crawling, extracting, vetting, and ranking news feeds

Palantir

Forward Deployed Engineer (Philanthropy Team)

May 2013 — September 2014

Java, SQL, Python

- Developed custom dashboard visualizations of commitments by the Clinton Global Initiative (CGI) over the past ten years
- Maintained and upgraded infrastructure for the National Center for Missing and Exploited Children (NCMEC)

Plum District

KPCB Engineering Fellow

May 2012 — August 2012

Ruby/Rails

- Corrected redemption of vouchers and allowed view of past offers in business center

TripAdvisor

Software Engineer Intern

December 2011 — January 2012

Java

- Removed cross-site scripting (XSS) vulnerabilities and improved display of Facebook likes, ratings, and recommendations

RESEARCH

Carta

Advisors: Dr. Michael Bernstein and Dr. Ramesh Johari, Stanford University

Fall 2014 — Present

Python, Ruby/Rails, SQL

- Leading team of seven in implementing and deploying platform with over 650 active users that uses 50 years of official Stanford Registrar enrollment data to provide personalized course recommendations for students

Apparition: Crowdsourced User Interfaces That Come To Life As You Sketch Them Winter 2014 — Summer 2014

Advisor: Dr. Michael Bernstein, Stanford University

JavaScript/Meteor

- Developed web application that utilizes crowdsourcing around a Method Draw canvas to quickly prototype interfaces

Searching for Supersymmetric Top Quarks at the Large Hadron Collider (LHC)

Fall 2012 — Spring 2013

Advisor: Dr. Paul Padley, Rice University

Python

- Used boosted decision trees to isolate decay of stop quarks from background top-top interactions
- Publication:** Sen, O. and Padley, B.P. Searching for Supersymmetric Top Quarks at the LHC [Thesis]. April 22, 2013.

Melody Analysis and Harmony Generation

Fall 2011 — Fall 2012

Advisor: Dr. Kurt Stallmann, Rice University

Python

- Determined key of input score given only melodic line and generated complementary harmonic progression
- Publication:** Sen, O. and Stallmann, K. Analysis of Melody Through Key Definition and Generation of Complementary Harmonies. Rice Undergraduate Research Symposium. Houston, TX, April 13, 2012.

Computationally Generating Musical Variations

Fall 2009 — Fall 2011

Advisor: Dr. Sandip Sen, University of Tulsa

Java

- Created systematic framework for representing musical scores and used genetic algorithms to create variations on themes
- Publication:** Sen, O. Creating Musical Variations Using Genetic Algorithms. *American Junior Academy of Sciences* 2011.

Social Networks and Norm Emergence

Fall 2008 — Summer 2009

Advisor: Dr. Sandip Sen, University of Tulsa

Java

- Analyzed comparative speed of emergence of a norm in social networks with different topologies and behavioral patterns
- Publication:** Sen, O. and Sen, S. Effects of Social Network Topology and Options on Norm Emergence. *Lecture Notes in Artificial Intelligence* Vol. 6069, p. 211-222, Springer-Verlag, 2010.

PROJECTS

onkursen.com: Personal website

Jekyll 2012 — Present

Road Trip Recommendations: Using regressions for Yelp restaurant recommendations

Python Fall 2014

Contagion: Modeling disease spread across social networks (Palantir Hack Week)

Python, D3 Summer 2013

Predicting Terrorist Attacks: Comparing models on the Global Terrorism Database

Python Spring 2013

All About Inverses: A talk that gives a concise primer on linear algebra

reveal.js Summer 2012

Sangleet: wrote/choreographed/directed a 15-minute musical

SoundCloud Spring 2011