

## EDUCATION

### Stanford University

September 2014 — June 2016 (expected)

M.S. Computer Science

Depth 1: Artificial Intelligence (AI)

Depth 2: Human-Computer Interaction (HCI)

### Rice University

August 2010 — May 2013

B.S. Physics

B.A. Mathematics

Minor: Computational and Applied Mathematics

## SOFTWARE ENGINEERING EXPERIENCE

### Accompany

Software Engineer Intern

June 2015 — September 2015

**Ruby/Rails, C++, SQL**

- Built an end-to-end pipeline from scratch for automatically crawling, extracting, vetting, and ranking news feeds
- Implemented algorithm to cluster news articles based on similarity and relevance in article titles and contents

### Palantir

Forward Deployed Engineer (Philanthropy Team)

May 2013 — September 2014

**Java, Groovy, 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/Velocity**

- 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**

- Implementing web app that uses machine learning algorithm to provide course recommendations for students

### Apparition: Crowdsourced User Interfaces That Come To Life As You Sketch Them

Advisor: Dr. Michael Bernstein, Stanford University

Winter 2014 — Fall 2014

**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)

Advisor: Dr. Paul Padley, Rice University

Fall 2012 — Spring 2013

**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

Advisor: Dr. Kurt Stallmann, Rice University

Fall 2011 — Fall 2012

**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

Advisor: Dr. Sandip Sen, University of Tulsa

Fall 2009 — Fall 2011

**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

Advisor: Dr. Sandip Sen, University of Tulsa

Fall 2008 — Summer 2009

**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