

EDUCATION

Stanford University

September 2014 — June 2016 (expected)
M.S. Computer Science

Rice University

August 2010 — May 2013
B.S. Physics, B.A. Mathematics

SOFTWARE ENGINEERING EXPERIENCE

Palantir

Forward Deployed Engineer (Philanthropy Team)

May 2013 — September 2014

Java

- Developed custom dashboard visualizations for the Clinton Global Initiative's commitments over the past ten years
- Maintained and upgraded infrastructure for the National Center for Missing and Exploited Children (NCMEC)
- Implemented secure password hashing and executed cloud migration for START/UMD Global Terrorism Database

Plum District

KPCB Engineering Fellow

May 2012 — August 2012

Ruby/Rails

- Implemented tracking mechanism for Remarketing, Omniture, and Google Analytics
- 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

Apparition

Advisor: Dr. Michael Bernstein, Stanford University

Spring 2014 — Present

JavaScript (Meteor)

- Developing webapp that utilizes crowdsourcing around a Method Draw canvas to quickly prototype interfaces

Searching for Supersymmetric Top Quarks at the LHC

Advisor: Dr. Paul Padley, Rice University

Fall 2012 — Spring 2013

Python

- Used boosted decision trees in ROOT TMVA to isolate decay of stop quarks from background top-top interactions
- Extended on phenomenological data and theory from Bhaskar Dutta et al. (Texas A&M)
- **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*. Washington, DC, February 16-20, 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.

Social Dilemmas and Aspiration Levels

Advisor: Dr. Sandip Sen, University of Tulsa

Fall 2007 — Summer 2009

Java

- Developed algorithmic approach to solve the Tragedy of the Commons in a multi-agent system using aspiration levels
- **Publication:** Sen, O. and Sen, S. Solving the Tragedy of the Commons by Adapting Aspiration Levels. *Proceedings of COIN@IJCAI09*. San Diego, CA, July 11, 2009.

PROJECTS

Contagion: model of diseases spreading across social networks (Hack Week)

Rice University Catalyst: website

Rice University South Asian Society: website

	Python, D3	2013
catalyst.rice.edu	HTML/CSS	2011-2013
sas.rice.edu	HTML/CSS	2011-2013