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Onkur Sen

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Education

Rice University, August 2010 — May 2013
B.S. Physics, B.A. Mathematics
Minor, Computational and Applied Mathematics
GPA: 3.57/4.00

Academic Honors

Sigma Pi Sigma Inductee	May 2013
Rice Trustee Distinguished Scholar	August 2010
Rice Century Scholar	August 2010
Robert C. Byrd Scholar	May 2010

Software Engineering Experience

Palantir May 2013 — Present
Forward Deployed Engineer (Philanthropy Team) **Python/Java**

- Developed custom visualizations of critical resource availability and surveys of medical institutions for refugees
- Integrated parcel data on sites affected by May 2013 Oklahoma City tornado to aid disaster relief efforts by Team Rubicon

Plum District May 2012 — August 2012
KPCB Engineering Fellow **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 December 2011 — January 2012
Software Engineer Intern **Java/Velocity**

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

Research

Apparition Spring 2014 — Present
Advisor: Dr. Michael Bernstein, Stanford University **JavaScript (Meteor)**

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

Searching for Supersymmetric Top Quarks at the LHC Fall 2012 — Spring 2013
Advisor: Dr. Paul Padley, Rice University **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 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.* Washington, DC, February 16−20, 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.

Social Dilemmas and Aspiration Levels Fall 2007 — Summer 2009
Advisor: Dr. Sandip Sen, University of Tulsa **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)		**Python, D3**	2013
Rice University Catalyst: website	catalyst.rice.edu	**HTML/CSS**	2011—2013
Rice University South Asian Society: website	sas.rice.edu	**HTML/CSS**	2011—2013