# **Abhraneel Sarma**

#### Education

University of Michigan School of Information

MS in Information | HCI & Data Science Specialization

Ann Arbor, MI 2016 - 2018

Indian Institute of Technology Guwahati

Bachelor of Design | Minor in Mechanical Engineering

Guwahati, India 2012 - 2016

## **Experience**

#### **Research Assistant**

University of Michigan School of Information, Ann Arbor

Oct '16 -

- Designed a survey to study the effects of different visual representations of statistical data on interpretation, and collected data from over 200 respondents.
- Analysed the responses using bayesian linear mixed-effects and item-response theory models to determine effects of the different visual representations.

#### **User Experience Intern**

Academic Innovation, University of Michigan, Ann Arbor

May - Aug '17

- Designed new features for a tool to explore of U-M course data. Conducted 7 usability tests to evaluate the new designs, and identified several UI changes.
- Developed an interview protocol to explore user attitudes towards the current features, and identify design requirements for future.

#### **Graduate Student Instructor**

University of Michigan School of Information, Ann Arbor

Sep '17- Apr '18

- Taught an undergraduate course in data manipulation using Python, Pandas, SQL and Spark & a graduate course on the psychology underpinning of design theory.
- Explained course concepts, conducted lectures and led discussion to a class of 60 students; designed course materials and homework assignments.

## **Projects**

#### Analysis of the effectiveness of storytelling and interactivity in InfoVis

#### Master's Thesis Project

Jun '17 -

- Conducted exploratory research, formulated research questions & methodology to compare effectiveness of different visualization strategies.
- Prototyped 16 visualizations, designed a survey using principles of learning theory to gather data on reader's interpretation, to be launched on MTurk.

#### **Predicting in Irony in English Tweets**

Natural Language Processing Course Project

Mar'18 - Apr'18

- Implemented a model for binary classification of english tweets based on recurrent neural networks (BiLSTM) which achieves a F1-score of 0.73.
- Used a social network text pre-processing tool and GloVe word embeddings to improve the model performance.

#### **About Me**

I am a UX researcher with strong quantitative and qualitative skills, experience in research of the design of data visualizations, &knowledge of statistics. I am passionate about using data-driven methods for understanding user behavior and creating better user experience.

### **Skills**

#### Quantitative

Python, Pandas
R
Javascript, D3.js
Data Visualization
Survey Design
Survey Analysis
Bayesian Data Analysis
Data Manipulation
NLP, Predictive models

#### Qualitative

Contextual Inquiry Affinity Analysis Photo / Diary Studies Usability Studies Heuristic Evaluation User Journeys

#### **Achievements**

Runners-up, Football, Inter IIT Sports Meet 2014

Semi-Finalist, Annual Intra-University Tennis Tournament (2014, 2016)

Semi-Finalist, Annual Intra-University Football Tournament (2016)