Prashant Chandrasekar

Industry Experience: 3.5 years. Research Experience: 5 years

18 Church St. Unit 1
Natick, MA, 01760

peecee@vt.edu
(540) 998 7654

EDUCATION

Virginia Tech – Blacksburg, VA **Graduation: Oct-Dec 2020**
Ph.D. Computer Science (GPA: 3.86/4.0)
Publication Link: http://peeceeprashant.weebly.com/

University of Michigan - Ann Arbor, MI December 2009
B.S.E Computer Science & Engineering

TECHNICAL BACKGROUND

Research Areas	Digital Libraries, NLP, Knowledge representation and modeling
Languages/Frameworks	Python, R (basic knowledge), PL/SQL, Java, JMP, Minitab
Frequently Used Libraries	Scikit-learn, NLTK, Gensim, HuggingFace Transformers, Pandas, etc.

RESEARCH EXPERIENCE

Human behavior during disruptions caused by hurricanes March 2018 - Current
Digital Libraries Research Laboratory – Blacksburg, VA
Role: Graduate Research Assistant
Goal: Identify infrastructure and human impact during hurricane and to propose best practices for Emergency Management System and other infrastructures to improve recovery time
Method:

1. Interview collaborators', who represent leaders in urban planning, transportation and power outage, and design a set of processes and analytical workflows to match their information need.
2. Develop strategy which maximizes our near-real-time collection of social media data, about hurricanes, that aligns with principal investigators and researchers' vision for modeling and simulation of impact, response and recovery.
3. Design and develop analytics workflows such as: a) predicting geo-location of collection of tweets, b) identifying tweets that talk specifically about power outage, infrastructure damage and transport disruptions, c) identifying user preparation and response as represented in social media, among others.
4. Manage data fusion efforts by integrating information from various sources and providing interface for data sharing and support for ad-hoc data and analytical requests.

Impact/Outcome: The team has been able to:

1. Collect over 100 million tweets with multiple derived (extracted and predicted) metadata of interest such as tweets pertaining to human preparedness and response, school closures, power outages, infrastructure damage, etc.
2. Build multiple trained models to predict/infer tweet geo-location, relevance and categories (such as tweet about utility damage, emotional support, among others), that can be applied to future hurricanes.
3. Develop text-based analysis such as sentiment, tweet topic, to corroborate with other (official) sources of information.

Depression in veterans May 2017- August 2017
Oak Ridge National Lab – Oak Ridge, TN
Role: Research Intern
Goal: Propose methodology for longitudinal study of veterans' psychological progress
Method: Literature review and proof-of-concept design
Impact/Outcome: Designed a state-of-the-art framework with a list of novel features for model building,

using psychological notes, authored by medical professionals, about their interactions with veterans.

Social network-based clinical trial for addiction recovery January 2015 – May 2018

Digital Libraries Research Laboratory **–** Blacksburg, VA

Role: Graduate Research Assistant

Programming Languages/Frameworks: **Python, R, JMP**

Goal: Build a social-network-centric framework and represent computer science-related efforts in the study aims to understand how participants, who are in recovery from substance addiction, behave with one another.

Method:

1. Interview clinical psychologists to a) understand what they are trying to learn from the clinical trial, b) to collect all the resources that they wish to include in the clinical trial and c) to ascertain the experience that they want the study participants to feel in this closed social network-based experiment.
2. Propose design of social network, with key features such as testimonials, AA-type virtual meetings, and integration of surveys, that bring a more "recovery-centric" feel to the participants.
3. Develop and instrument all the data collection methods that help capture the very minute feedback that we can receive from the participants, regarding their peer-to-peer engagement and website engagement.
4. Aid statisticians in their research efforts, by designing and developing data collection and analysis pipelines to bring the data from all the heterogeneous sources, under one umbrella.
5. Conduct exploratory analysis of behavior of participants in the network and build models to predict/infer behavioral outcomes such as information propagation, engagement and social influence and psychological outcomes such as addiction relapse.

Impact/Outcome: The team has been able to:

1. Successfully conducted 5 clinical trials that involved a total of 1280 participants.
2. Integrate and process close to 13000 survey responses and social network-based engagement data.
3. Learn from execution and analysis: a) how monetary incentives play a role on user engagement, b) that it was important to group people with similar backgrounds and addiction history, for longer interactions and c) that it is best to have shorter term trials over long-term so that we could have multiple iterations and test out many more theories.

INDUSTRY EXPERIENCE

Intuit Inc. – Bangalore, India April 2011 – November 2013

Intuit Inc. - Mountain View, California June 2010 – March 2011

Lehman Brothers Inc. - New York, New York May-August 2007

Emirates Airlines – Dubai, U.A.E May 2005 - August 2005

COMPETITION

Natural Language Processing January 2016 – May 2016

Discourse Parsing - identify implicit and explicit discourses in a sentence

As a part of a class project submission for the class, NLP for Noisy Data, my project team entered into a competition to a CONLL conference competition to parse discourses characterized by the Penn Treebank. We extracted various features and employed a variety of classification models to extract argument pair and connectives.