SUMEET AGRAWAL

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EDUCATION

University of Southern California (CGPA: **3.5**)   MS, Computer Science (Specialization in Data Science)   **Expected May 2018**

Vellore Institute of Technology, Vellore (CGPA: **3.8**)   B. Tech, Computer Science and Engineering   **May 2016**

WORK EXPERIENCE

Graduate Research Engineer   **Integrated Media System Research Centre, USC**   **Fall 2016 - Present**
- Visualizing and classifying disaster-related social media data to enhance situational awareness during disaster response.
- Estimating social POI boundaries by comparing and analysing data from different media sources over a time period.

Project Software Engineer   **IDC, Indian Institute of Technology, Mumbai**   **Spring 2016**
- Project Lead of "**Jellow**" - Developed a multilingual Alternative & Augmentative Communication (AAC) App especially for children suffering from Cerebral Palsy (difficulty in speaking) and for a general Educational purpose.
- Implemented preference algorithm and performed server-side user data analysis using PHP, MySQL and Python2.7.
- "Jellow" Application was mentioned as a news article in two leading newspapers of India, Times of India and Hindustan Times.

Android Developer Intern   **Blazingtrail, India**   **Summer 2015**
- Project **"DigiDoc"** - added the feature to save pictures of the document along with extracting useful information for analysis.
- Technologies incorporated - OpenCV libs, canny edge detection, Gaussian blur, OCR Tesseract for image text extraction.

TECHNICAL SKILLS

Programming Languages: Python2.7 (5 Years), Java (7 Years), C++ (7 Years), C, PHP, HTML5/CSS, Octave.
Machine Learning Tools: Scikit – Learn, Spark, Caffe, Weka, AWS, Hadoop, HBase, TensorFlow.
Software and Programming Tools: Flask, SQLAlchemy, Heroku, Ubuntu, Android Studio, Unity3D, Docker, MySQL, SQLite.

PROJECT EXPERIENCE

Automatic Question Generation Model (Jeopardy Game)   **Summer 2017**
- Developed a data acquiring application to collect various questions for each type of sentences like the Jeopardy Game.
- Performed Sentence Selection by selecting topically important words from text document. Gap Selection by employing Stanford parser extract noun phrase and Classify question quality based on pre-trained SVM classifier.

Location Sentiment Search, Information Lab at USC (Sponsors – Google, NSF, Oracle)   **Spring 2017**
- Assigning mood to locations by comparing 5 million text and image sentiments over a time period to generate a search query.
- Used convolutional neural networks (CNN) and SentiStrength for sentiment analysis and applied mathematical statistics.

Social Urgency Map, Information Lab at USC (Sponsors – Google, NSF, Microsoft)   **Fall 2016**
- To Prioritize media data generated during Disaster Crisis in affected areas to help first responders and decision makers.
- Performed analyzes on 11 disasters of different disaster types and successfully classified relevant or not relevant data.
- Machine Learning techniques applied - NLTK, Word2Vec, Latent Semantic Indexing and Logistic Regression for classification.

MedHap (Cal Hacks 3.0 Hackathon) – Among Top 5 teams   **Fall 2016**
- Designed a medical app to instantly communicate patient's skin textural abnormalities to dermatologist's for analysis.
- Used **Tanvas** Haptic SDK to generate dynamic skin textures and Watson's visual recognition for skin disease classification.

Multilingual Voice Search (AT&T Hackathon) – Runner-ups   **Fall 2016**
- Created a smart text learning model capable of understanding multilingual voice and texts to generate the search query.
- Developed an android App using Nuance Mix Automated Speech Recognition and Natural Language Understanding Model.

Prediction of Heart Diseases   **Fall 2015**
- Analyzed heart-related issues using patient data and predicted the possibility of Diseases to improve patient's health.
- Used word tokenization to filter out irrelevant and missing data and applied Random Forest model for classification.

PUBLICATIONS

- Published Research Papers in **IEEE Data Science and Advance Analytics (DSAA) 2017 Conference** and in **IEEE Multimedia Big Data 2017 Conference** – Keywords are Big Data, Machine Learning, NLP, Vote Entropy, NLC, Deep Learning.
- Published 3 research articles in International Journals - https://scholar.google.com/citations?user=BOiZ_vQAAAAJ&hl=en