SUMEET AGRAWAL

sumeetag@usc.edu • 2707 Portland Street Los Angeles, CA 90007 • https://sumeetag.github.io/
+1 (213) 274 2129 • https://www.linkedin.com/in/sumeet-agrawal-987059125 • https://github.com/sumeetag

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** **Sept 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.

Data Scientist **Archie.AI, San Francisco** **June 2017 - August 2017**

- Built a real-time Anomaly detection model using K-means clustering and moving average technique for classification.
- Generated a Google AdWords campaign optimizer using Recurrent Neural Networks and PCA for dimensionality reduction.

Project Software Engineer **IDC, Indian Institute of Technology, Mumbai** **Jan 2016 – July 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.

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) **June 2017 - August 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.

Geo-spatial Multimedia Sentiment Analysis, Information Lab at USC (Sponsors – Google, NSF, Oracle) **Jan 2017 - June 2017**

- Proposed a framework to normalize sentiment from multiple data types (image & text) using various analysis techniques.
- 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) **Sept 2016 - Dec 2016**

- To Prioritize media data generated during Disaster Crisis in affected areas to help first responders make better decisions.
- 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 **November - 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 **October - 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.

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

HIGHLIGHTS

- Wrote an article on Generative Adversarial Networks on Medium.com which got featured under Artificial Intelligence section.
- Published 3 video tutorials covering various ML concepts which anyone can refer to build their own Machine Learning model.