AAYUSH MAINI

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EDUCATION

Columbia University Aug 2017 – Dec 2018 (Expected)
Master of Science in Computer Science, GPA: 3.84/4.0 *New York, US*

· Relevant Coursework: Analysis of Algorithms, Deep Learning, Machine Learning, Cloud Computing, Project Management with Scrum, Natural Language Processing

International Institute of Information Technology Aug 2013 – Aug 2017
Bachelor of Technology in Computer Science and Engineering, GPA: 3.8/4.0 *Hyderabad, India*

· Relevant Coursework: Computer Vision, Optimization Methods, Data Structures, Operating Systems, Game Theory

EXPERIENCE

Simplr May 2018 – August 2018
Machine Learning Intern *San Francisco, California*

· Designed baseline machine learning models and deep learning models that classify customer support tickets. A ticket-load balancer uses the classifications to route the tickets automatically to customer support agents maintaining reasonable workloads for agents

· Designed a text-to-keywords summarization framework. The framework uses LDAModel to compute document-topic-word distribution over a given ticket text. This distribution is used to produce a set of keywords that helps a custom support agent to query a knowledge base and get help on resolution of the ticket at hand

Samsung R&D (Virtual Reality & Graphics) May 2016 – July 2016
Software Developer Intern *Bangalore, India*

· Designed and developed a desktop-android framework on top of FFMPEG-FFSERVER stack that offers a virtual reality interface for an android user to play PC games on a head mounted device

· The framework monitors real time network conditions using the RTSP protocol and adjusts the bandwidth automatically to provide seamless experience to the user by trading off video quality for bandwidth

· The vanilla FFSERVER stack is modified to collect throughput information which helps estimate network conditions. The quality of the frames fetched from the live game is adjusted according to the network conditions. On the receiving end, Samsung's native VR API is used to stereoscopically render these frames

MAJOR PROJECTS

Dining Concierge Virtual Assistant

· Developed an end-to-end web application that gives restaurant recommendations to a user. The user talks to a chat-bot which elicits required information for recommending a place and making a reservation (if required)

· Amazon's Lex service is used to train the chat bot to enable it to elicit information from a user. The Web infrastructure rests on AWS Lambda, S3 and recommendation engine rests on AmazonML, ElasticSearch, DynamoDB

Artist Recommendation System

· Developed a simple artist recommendation system using the data available from AudioScrobbler. The data set is available as song play counts for each (user, artist) pair

· The data set is converted to a (user X artist) matrix and the model is trained by computing a low rank approximation for this matrix using ALS optimization algorithm. The system gives ranked recommendations based on approximated play counts for all the artists. The framework is implemented using Spark

OTHER PROJECTS

Natural Language Processing

· HMM Named Entity Recognition Tagger, Neural Network Model for dependency parsing, Probabilistic-CFG Parser

Computer Vision

· Scene parsing and semantic labeling using Convolutional Neural Networks + Recurrent Neural Networks, Neural Style Transfer

TECHNICAL SKILLS

C++, Python, Matlab, TensorFlow, MySQL, Neo4j, Redis, VB.NET, git, Javascript, Keras, Spark, Nodejs, React