LinkedIn GitHub Website
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OMKAR ACHARYA

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EDUCATION

North Carolina State University, Raleigh, NC — Aug 2016 – May 2018
Master of Computer Science — GPA: 3.93 / 4.00
Coursework: Design and Analysis of Algorithms, Business Intelligence, Artificial Intelligence, DevOps, Computer Networks, Databases, Automated Learning and Data Analysis, Foundations of Data Science

Pune Institute of Computer Technology, Pune, India — Aug 2012 – Jun 2016
Bachelor of Engineering, Computer Engineering — GPA: 3.78 / 4.00
Coursework: Data Structures, Software Engineering, Data Mining, Natural Language Processing

EXPERIENCE

Backend Developer (Co-op) — **Quantworks Inc.**, Raleigh, NC — Sept 2017 – April 2018

- Continuing the work done during the previous internship on the Smart Abstractor Assistant (SAA) and automating the process of loading the clinical data from medical records into REDCap database using RED-I APIs
- Building the automation pipeline using Amazon Web Services, REDCap, and Python Cron jobs for the SAA

Backend Developer Intern — **Quantworks Inc.**, Raleigh, NC — May 2017 – Aug 2017

- Designed and implemented a Smart Abstractor in Python for medical data extraction from scanned PDF records
- Wrote Adobe Acrobat plug-ins in C++ to automatically optimizing, highlighting, and bookmarking of the PDF files
- Implemented Regular Expressions in Python to make the context based searching efficient
- Brought down the time required for the manual abstraction from **3-4 hours** to **15-20 mins**

Machine Learning Intern — **iKnowlation Research Labs**, India — Aug 2015 – April 2016

- Led a team of 4 for a project to describe videos in English using Convolutional and Recurrent Neural Networks
- Finetuned two Nvidia CNN Caffe models on ImageNet dataset of 1.2M images
- Trained Long Short-Term Memory (LSTM) models on MSCOCO dataset of 120K images
- Tested both the models on cross-validation dataset and improved the system's accuracy from **63%** to **77%**

PROJECTS

AgileBot

- Developed a Slack bot in Python which gives developer's status in daily standups, grooms backlog, and plans sprints
- Worked on the interaction between GitHub, Rally, and Slack; Wrote unit tests for each of the modules

Settlement Mapping

- Implemented Gaussian Mixture Models (GMM) using Expectation Maximization algorithm and 1-Holt classifier
- Achieved **80%** accuracy as compared to Weka's RIPPER rule-based classifier and Scikit-Learn's GMM

Sentiment Analysis

- Built Logistic Regression classifier with **60.3%** accuracy on Twitter and **84.8%** on IMDB
- Improved the system using Doc2Vec and Artificial Neural Nets with **63.56%** accuracy on Twitter and **83.49%** on IMDB

Yelp Restaurant Photo Classification

- Trained a Convolutional Neural Network and built a Support Vector Machine classifier on Yelp's dataset using Caffe
- Achieved **134th** rank in the Kaggle competition with the F-1 score of **0.765**

SKILLS

Languages / Databases: C++, Python, C, R, Java, Node.js, Shell Scripting, Q, SQL, Oracle 11g, MongoDB
Machine Learning: Scikit-Learn, Caffe, Numpy, Pandas, GNU Octave, Weka, Doc2Vec, NLTK, Apache Spark
Web Technologies: HTML5, CSS3, PHP, Bootstrap, phpMyAdmin, Python - Bottle, WordPress, REST API
Tools / Frameworks: Tableau, JDBC, Eclipse, Jenkins, Travis CI, Adobe SDK Plug-ins, IntelliJ, GitHub, AWS