Shreyas Govinda raju

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Education

May 2018 **University of Southern California**, Los Angeles
M.S, Computer Science
Coursework : Machine Learning, Applied Natural Language Processing, Artificial Intelligence, Operating Systems, Databases and Algorithms.

May 2015 **National Institute of Technology Karnataka**, India
B.Tech, Computer Science and Engineering

Technical Skills

Programming Languages:	Python, C/C++, Javascript and Shell Scripting.
Web Technologies:	Node.js, Bootstrap, Webapp2, Django, Flask and Prototype.
Applications :	Apache Storm, Apache Hadoop, MapReduce, Kafka, Jenkins, Redis, d3.js, Heroku, Google App Engine and MySQL.

Work Experience

Jan 2018 - May 2018 | Software Development Intern, **Mathworks** (Natick, USA)
- Developed a code signing tool to digitally sign executables of Mathworks product Installers.
- Integrated the script as a part of build process in Release Cycle.

Tech stack | **Perl**

May 2017 - Aug 2017 | Software Development Intern, **Tintri** (Mountain View, USA)
- Built a tool to highlight known fingerprint failures from Tintri platform test result suites.
- Analyzed different log files which are filtered with known patterns and time frame for analysis.
- Developed an end to end web application to accommodate easy analysis and reporting of bugs.

Tech stack | **Python, Django, Bootstrap, JQuery**

June 2015 - July 2016 | Software Engineer, **Samsung Research Institute Bangalore** (Bangalore, India)
- Developed I/O modules in C++ on an automated caching software tool called Autocache.
- Created a web interface for the Autocache stand-alone application with prototype framework.
- Discussed implementation plan of flushing cached data into secondary storage drives.
- Led in the setup of debug environment for kernel debugging in RHEL.

Tech stack | **C++, Jenkins, Visual Studio, Git**

Projects

- **Machine Learning**
  - Implemented linear regression, multinomial logistic regression, and KNN using Python Numpy libraries.
  - Calculated the accuracy of each algorithm on the UCI Wine Quality dataset and MNIST datasets.
  - Developed a multi-layer perceptron neural network with relu and softmax non-linearities.
  - Implemented K-means algorithm to perform clustering and Gaussian mixture model for density estimation.
  - Developed a binary classifier on email dataset from Enron investigation using Naive Bayes classification.
- **Real Time Analytics**
  - Developed a real-time, distributed data processing application for Twitter tweets.
  - Implemented topology linking Spouts and Bolts to evaluate top Trending Twitter feeds.
  - Developed a python script to parse and visualize Top-N Hashtags from Twitter URLs.
  - Created a real-time visualization using Redis, flask server and d3.js.
- **Parser**
  - Built a constituency parser trained from ATIS portion of Penn Treebank.
  - Constructed a grammar from the binary trees along with individual probabilites and most frequent rules.
  - Implemented CKY algorithm to parse input sentences with grammar and evaluated its F1 score.
- **Weenix kernel**
  - Modified a Unix based weenix operating system.
  - Designed and built features such as processes, threads, context switching and synchronization primitives.
  - Developed a Virtual File System (VFS) to provide a common interface between kernel and other file systems.
  - Implemented Virtual Memory(VM) providing an abstraction of address space for user processes.