MACK CROLANGUAGE

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA

Master of Science, Computer Science, December 2015

Selected Coursework: Introduction to Machine Learning (10-601, Fall 2014), Distributed Systems (15-440/640, Fall 2014), Algorithm Design and Analysis (15-451/651, Fall 2014), Web Apps Development (15-637, Spring 2015), Machine Learning with Large Datasets (10-605, Spring 2015), Graduate Artificial Intelligence (15-780, Spring 2015)

Birla Institute of Technology and Science, Pilani, India

Bachelor of Engineering (Hons.), Computer Science (Minor: M.Sc. Economics), July 2014

SKILLS

Programming/Scripting Languages: (Proficient) Java; (Familiar) Python, C, SQL, Javascript, MATLAB, Perl

Frameworks and tools: Hadoop, Django, DKPro for NLP, Maven, Git

EXPERIENCE

Software Engineering Intern

Yahoo! Inc., Sunnyvale, CA, May - August, 2015

- Interned with the user data team, which is part of cloud services at Yahoo!

Research Intern

Ubiquitous Knowledge Processing Lab, TU Darmstadt, Germany, January - June, 2014

- Developed an application (in Java) using the DKPro library to automatically solve multiple choice reading comprehension questions. Using text similarity and textual entailment measures, it obtained the 2nd best score in the CLEF Entrance Exams competition.

Research Student

Computer Engineering and Networks Laboratory, ETH Zurich, Switzerland, July - December, 2013

- Developed an application (in Python) to use a tree-based learning algorithm to model the deadline hit and miss patterns of periodic real-time tasks. The algorithm used formal verification techniques to generate a regular language-based guarantee to predict future deadline hits and misses.

Developer (Google Summer of Code)

Student Developer for National Resource for Network Biology (NRNB), Summer 2012

- Built an app (in Java) for Cytoscape, an open-source software for complex network visualization. The app helped users to visually analyze and modify molecular interaction networks.

PROJECTS

MapReduce Engine

Carnegie Mellon University, Fall 2014

- Implemented a Hadoop-like MapReduce facility, with master and worker nodes for map-reduce operations over large datasets, with a distributed file system, and fault tolerance to address datanode failures.

Object Recognition Using CIFAR-10 Dataset

Carnegie Mellon University, Fall 2014

- As part of an in-class Kaggle competition, several approaches were tried to train a model using 4000 images for the CIFAR-10 dataset. With GIST descriptors and a Kernelized (RBF) SVM, a test accuracy of 61% was obtained on a dataset consisting of 15000 images.

Intelligent Indoor Emergency Response System

Carnegie Mellon University, Spring 2015

- Developed a priority-based auctioning algorithm for task allocation in a multi-agent environment. Using a modified A* algorithm, tasks were prioritized based on proximity to the location of the fire resulting in an efficient evacuation.