

# 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 Userdata 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 2<sup>nd</sup> best score in the CLE 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 helps users to visually analyze and modify molecular interaction networks.

## PROJECTS

### **MapReduce Engine**

*Carnegie Mellon University, Fall 2014*

- Implemented a Hadoop-like Map Reduce 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.