

# Aseem Raina

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## EDUCATION

### Master of Science in Computer Science

North Carolina State University, Raleigh, NC

Aug 2017 - May 2019

GPA 3.45/4.0

### Bachelor of Engineering in Information Technology

University of Pune, Pune, India

June 2013 – Jun 2017

GPA 9.22/10

## EXPERIENCE

### Research Assistant – Thesis | North Carolina State University - Raleigh, NC

Aug 2018 – Present

- Project – Using real-time multichannel self-regulated learning data to enhance student learning and teachers' decision making with MetaDash | <https://goo.gl/oTZaa7> - Machine Learning, Deep Learning, NLP
- Investigating methods to increase accuracy of current models by optimization and data cleaning. Working on analyzing video feed and conversation text data along with facial detection to identify emotions.

### Developer Summer Analyst, Technology | Barclays Investment Bank - NY

Jun 2018 – Aug 2018

- **drDNS Runner** | Developed a Django web application for disaster recovery and management to automate the process of DNS failover and failback for the Barclays JARVIS tool. Reduced manual intervention and improved latency by 70%.
- **Loadbalancing Analytics** | Wrote a Python script to handle Ansible orchestration for command execution across several hosts. By adopting a multi-thread approach, reduced the execution time by 50%.

### Software Developer Intern | IBM - Cloud and Analytics - Pune, India

Jun 2015 – Jul 2017

- **Watson** | Developed a test automation framework from scratch for #codename:Eleanor using NodeJS and Mocha/Chai, as part of the development and testing team for IBM ConnectToCloud (C2C).
- **Log Analysis** | Developed a module for analyzing and extracting metrics from log files, as part of a microservices framework under IT Operations Analytics, using Java and JUnit. Wrote a Python script to generate log files in various formats, thereby reducing manual effort.
- **Bluemix** | Worked as a part of the development and testing team of Bluemix environment for IBM Watson and Predictive Analytics APIs, for log file clustering and analysis including anomaly detection.

## SKILLS

**Languages** Java, Python, C++, C, JavaScript, Embedded C, SQL

**Frameworks** Keras, Pandas, Django, Flask, MySQL/NoSQL, SQLite, Junit, Git, RESTful, Spring, Hibernate, Jenkins, Mocha, Chai, Slack API, Hadoop, Apache Kafka, Node.js, TensorFlow

## PROJECTS

### Remote Intelligent Assistant for Linux | Machine Learning, NLP

- Developed a Linux based Desktop Assistant using ML and NLP. Converts instructions in English given by user to syntactically correct Linux commands. The application continuously learns and adapts to user feedback. The commands can be run on the user machine remotely using Slack API.

### Pre-release Movie Success Prediction | Machine Learning

- Developed an application to predict the success of a movie before its actual release. Tried and tested an ensemble of models including Xgboost and Random Forest after data cleaning and pre-processing. Achieved an accuracy of 64% which is much more than linear models and previously achieved results.

### Shuttlecock Tracking and Trajectory Estimation | Image Processing

- Worked on a project to detect a shuttlecock in the initial phase of its flight and estimate the trajectory using regression concepts, using Microsoft Kinect. The above data was transferred to a robot for successful return of service. Achieved an accuracy of 93%. Published our work in an international journal.

### Real Time Traffic Analytics using Social Media Feed | Machine Learning, NLP

- Developed an application to post real time traffic updates to a dashboard, including the possible reasons for congestion (using NLP). Trained a sentiment analysis ML model for the same.

## ACHIEVEMENTS

Best Implementation

National Chemical Laboratory, VertBlue Hackathon, India

National 4<sup>th</sup> /89 and 11<sup>th</sup> /110 teams

ABU Robocon 2014 and 2016, India

Winner

Java and C Programming Contest, Maharashtra Institute of Technology, India

First Runner Up

Paper Presentation Contest, College of Engineering Pune, Pune, India