# HARSHINI KEERTHI VASAN

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## EDUCATION

**Master of Science, Computer Science** May 2019
University of Utah, Salt Lake City, Utah, GPA: 3.8/4

**Bachelor of Engineering, Computer Science and Engineering** May 2014
Anna University, Chennai, India, GPA: 8.3/10

**Deep Learning Specialization** Aug 2018
Deeplearning.ai, Coursera

**Relevant Coursework**: Advanced Algorithms, Machine Learning, Natural Language Processing, Database Systems, Data Mining, Data Structures, Object Oriented Programming, Operating Systems, Software Engineering

## TECHNICAL SKILLS

**Programming Languages:** Java, Python, C++, Groovy, MATLAB, R

**Framework &Web Technologies:** HTML, CSS, JavaScript, Bootstrap, React, Node.js, Express.js, TensorFlow

**Special Tools & Software:** Service Now, JIRA, Postman, SoapUI, Git, Cloud9, Jupyter, Pandas, Scikit-Learn

**Databases:** MySQL, Oracle, MongoDB

**Areas:** Software Engineering**,** Full Stack Web Development**,** Data Science**,** Machine Learning

## EXPERIENCE

**Graduate Teaching Assistant:** *University of Utah, Salt Lake City, Utah* Aug 2018 – Present
CS3810: Computer Organization

- Explain the implementation of assembly language instructions in MIPS architecture to around 200 students.
- Evaluate homework, exams, and hold office hours to ensure students understand the course concepts.

**Graduate Research Intern:** *University of Utah, Salt Lake City, Utah* Jan 2018 – Aug2018

- Worked in the Algorithmic Fairness domain to eliminate bias in predictive policing and recidivism feedback.
- Implemented algorithms on statistical and reinforcement machine learning approaches to optimize the efficiency of semi bandit feedback algorithm in an online linear optimization framework to mitigate the bias problem.

**Project Engineer**: *Wipro Technologies, Chennai, India* Nov 2014 – May 2017

- Developed a web service for an internal gift card activity based on C++ and SoapUI tool.
- Analyzed erroneous production code, identified over several patterns of issue occurrences and created code fixes that enhanced the application performance by 60%.
- Developed scripts on SoapUI using Groovy programming language to automate test cases for refund applications that saved the testing time by 50%.
- Held the responsibility to train around 3 batches of rookies on Web Service Architecture implementation in Java.

## PROJECTS • *GITHUB HANDLE*

**Yelp Camp Web Application** May 2018 – Jul 2018

- Developed a full stack **Node.js** web application for creating and reviewing camping websites all over the world.
- Designed the front-end user interface with HTML5/CSS/EJS/Bootstrap. Implemented the backend using JavaScript, Express and MongoDB. Exposed the application using REST/HTTP APIs.

**A Data Mining Approach on Attrition Rate Analysis of Employees** Jan 2018 – Apr 2018

- Determined the most important factors that affect the attrition rate of employees using **Python** and **R**.
- Applied techniques such as Data Preprocessing, Data Exploration, Principal Component Analysis, Clustering and Apriori algorithm to find the correlation between various factors on the HR Analytics dataset (Kaggle).

**Question Classification using Supervised Machine Learning Algorithms** Oct 2017 – Dec 2017

- Developed an automated question classification system through machine learning approaches in **Python.**
- Implemented feature extraction on the data set (TREC Data) using Natural Language Processing techniques.
- Experimented the accuracy of the classifier on 5 machine learning algorithms – Decision Tree, Perceptron, Support Vector Machines (SVM), Nearest Neighbors (NN) and Naive Bayes (NB).

**Information Extraction using Natural Language Processing** Oct 2017 – Dec 2017

- Designed and built an information extraction system for Latin American news articles using **Python.**
- Used Natural Language Processing techniques such as sentence tokenization, regex matching, noun phrase extraction and POS tagging. Achieved an F-Score of 0.41 on the final test set.

**Weather Application - Using ReactJS** May 2017 – Jun 2017

- Developed a client application to show the weather details of a particular city for the next 5 days.
- Implemented React routing as an enhancement and used Gulp to transform JSX into JS.

## ACHIEVEMENT

**Prodigy Award**, Wipro Technologies, for handling a critical gift card service release. Jul 2017