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# HITESH VERMA

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## EDUCATION

**Northeastern University, Khoury College of Computer Sciences**, Boston, MA Dec 2019

*Master of Science in Computer Science* (GPA: 3.76)

**Coursework:** Machine Learning, Natural Language Processing, Data Mining Techniques, Information Retrieval, Algorithms

**Visvesvaraya Technological University**, Bengaluru, India June 2015

*Bachelor of Engineering in Information Science and Engineering*

**Coursework:** Design and Analysis of Algorithm, Data Structures with C, Object-Oriented Programming with C++, Java and J2EE

## WORK EXPERIENCE

**IBM**, Austin, TX *Software Developer Intern* May 2019 - Aug 2019

- Using hybrid CNN and Resnet50 architecture, built a model for detecting fake images. Utilized Watson Studio for deploying model and IBM Blockchain service for storing hash value and meta-data of fake images.
- Delivered Terraform modules for provisioning IBM Cloud resources. Accelerated IBM Cloud adoption via delivery of automation to be leveraged in cloud native solutions and published these reusable assets to open source for IBM Cloud customers.
- Kubernetes, Docker, InfluxDB and Grafana were used for visualization and monitoring stability of the resources.

**Bright Horizons Family Solutions**, Watertown, MA *IT Software Developer Intern* May 2018 - Dec 2018

- Created a chat-bot application utilizing C#, Azure Bot service and LUIS for assisting Back-Up Care customers.
- Initiated Ionic Mobile apps build and release automation using Azure DevOps, Jenkins, and Visual Studio App Center orchestration with Python scripts for environment provisioning and distribution; boosted time-to-market by more than 80%.

**Tesco HSC**, Bengaluru, India *Software Engineer* Aug 2015 - July 2017

- Created a web app with ASP.NET Web API, Entity Framework and JavaScript to provide consolidated customer data from multiple databases using SQL Server. Reduced support team efforts by 30% and considerable amount of time for Business user.
- Delivered Jenkins pipeline orchestration with PowerShell automation of stages and Chef Cookbooks using Ruby scripts.

## ACADEMIC / PERSONAL PROJECTS

**Competitive Intelligence: Dynamic Pricing** (Python, Keras, Pandas, Scikit-learn) June 2019 - Aug 2019

- Fitted RNN, XGBoost and DNN models with entity embedding to predict product pricing based on engineered features.
- Performed exploratory analysis of raw data (1.4M rows) from Kaggle competition in Pandas and achieved 0.69 RMSLE on test.

**Smart Essay Grader using Deep Learning** (Python, Keras, NumPy, Pandas) Feb 2019 - Apr 2019

- Built Multilayer Bidirectional LSTM and Feed-Forward Neural Network model pipeline to devise an automated essay scoring and feedback system and achieved 0.16 RMSE on test set.

**Spam Messages Detector** (Python, NumPy, Pandas, Scikit-learn) Jan 2019 - Feb 2019

- Implemented Logistic Regression using Gradient descent from scratch and built a spam-based classifier with 91% accuracy.
- Incorporated Newton's method, Decision Tree, Naïve Bayes and AdaBoost algorithm for performance comparison.

**Oven-Bot** (Python, OpenCV, Google Cloud Platform) Apr 2018

- Using Google Cloud OCR and IBM Watson, developed an application for empowering visually impaired to efficiently use touch-screen based microwaves via display analysis and speech recognition.

**American Sign Language Interpreter** (AWS, Python) Nov 2017

- Developed an audio-visual application to interpret sign language through hand gestures using Leap motion controller to generate dataset and AWS Machine Learning model to predict English words with 91% accuracy.

## TECHNICAL KNOWLEDGE

**Languages:** Python, Java, C#, JavaScript, Bash, SQL, HTML, CSS

**Tools:** Kubernetes, Docker, Watson Studio, Jupyter Notebook, Terraform, Jenkins, Chef, Git, AWS, SSMS

**Libraries/ Frameworks:** TensorFlow, Keras, Scikit-learn, Pandas, NumPy, Scipy, NLTK, Matplotlib, Spark

**ML Algorithms:** Decision Tree, Random Forest, SVM, PCA, K-Means Clustering, Naïve Bayes

## RECOGNITION

- Earned "Best use of AWS" award for American Sign Language Interpreter in Wentworth MLH hackathon'17.
- Awarded first prize for "Oven Bot" at Perkins MLH hackathon'18 organized by Perkins School for the Blind, MA.