

# SUMITH REDDI BADDAM

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## EDUCATION

Master of Science in Data Science	Indiana University Bloomington	May 2021
Master and Bachelor of Technology in Computer Science	International Institute of Information Technology Bangalore CGPA: 3.51/4	June 2017

## PATENT AND RESEARCH PUBLICATIONS

- **Prediction of issues customers face in a software using unsupervised learning** Cisco Patent – 2019  
Implemented Deep Neural Network model in TensorFlow which predicts the issues customers might face in a Cisco product post its release, helping developer teams fix them prior with an accuracy of 95% on Cisco's Next-Gen devices
- **Customer Success using Deep Learning** Advances in Economics and Business Vol. 6(6)  
Built a prediction model for prioritizing the bugs identified during testing phases whether to be fixed fast or can wait. Unstructured bug attributes like descriptions, error log files along with 170 structured fields were used for building the system. It was implemented using LSTM and CNN in Keras and TensorFlow.
- **Intelligent defect creation system using Siamese CNN LSTM techniques** ICBAI, 2018 - IISc Bangalore  
Implemented a duplicate bug detector that identifies whether a newly created bug is a duplicate of an existing bug in the Cisco Defect Tracking System and then retrieves all similar bugs from the database with an accuracy close to 90%

## PROFESSIONAL EXPERIENCE

- Data Scientist**, Cisco Systems Inc., India Jan 2017 – Aug 2019  
Worked on building machine learning models to improve the quality of Cisco products and its internal workflow:
- Recommendation engine for identifying peer reviewers for testing on Cisco's code review platform using NLP
  - Keywords extraction and document classification of service request cases using unsupervised LDA modeling
  - Classification of Cisco products into various categories to help the sales teams improve their revenue generation
  - Identification of files that get impacted when set of files are committed to repository using Association Mining
  - Clustering the features of products based on the text data and summary fields with NLP and K-means clustering
  - Software upgrade recommendations to customers using random forest and data mining

- Big Data Analytics Intern**, Zettamine Labs Pvt. Ltd., India May 2016 – July 2016  
Built "e-commerce evaluator" product that web scraps data from various e-commerce websites and analyses customer review and product pages using sentiment analysis models and NLP to provide insights to manufacturers.

- Data Semantics Intern**, DataWeave Software Pvt. Ltd., India May 2015 – July 2015  
Built an automation engine to classify the ecommerce products into various categories using SVM, random forest and neural networks. Program was built to scale to 100 Million products concurrently using distributed systems.

## TECHNICAL SKILLS

- **Languages:** Python, R, Java, C, C++, Javascript, HTML, Matlab, JDBC, UML, Linux, Unix
- **Platforms:** TensorFlow, Keras, Tableau, OpenCV, Scikit-learn, Anaconda, AngularJS, NodeJS, Flask, Django
- **Database:** MongoDB, MySQL, NoSQL, AWS, Parse cloud database, ZoDB

## KEY PROJECTS

- Human Robot Interaction using Natural Language Processing and Computer Vision:** Fall 2016
- Implemented 3-layer virtual assistant equipped with chat/dialogue bot, video and speech analysis in Python.
- Implementation of Deep Neural Networks for Object Recognition in Python:** Fall 2016
- Visual categorization of objects using Convolution Neural Networks and Principle component analysis.
- Automated Essay Grading System:** Spring 2016
- Feature extraction on text data using POS Tagger, Word2Vec and modeling with NLP and ensemble learning.
  - Implemented Association rule mining, classification, clustering and statistical analysis to extract insights.
- Bayesian Belief Networks for Restaurant violations predictions:** Spring 2016
- Neural network and Bayesian belief networks for predicting violations of a restaurant using Yelp dataset.
- Visual Categorization with Bags of Key-points:** Fall 2015
- Multi-class classification of objects in an image using SIFT descriptors and Support Vector Machine classifier.
- Carpooling web application in NodeJS with Object Oriented Programming paradigm:** Fall 2014
- Built ride sharing application on AngularJS and NodeJS. Implemented the database using JDBC and MySQL.