**Mehul Suresh Kumar**

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| **SUMMARY** | | | |
| I am an experienced software developer with a Master of Science Degree in Computer Science with a focus in Artificial Intelligence. I have served as a team member on enterprise-wide technology transformation projects, and in commercial development with cutting-edge applications of data driven automation. My passion is helping organizations leverage new technologies that generate significant business value. | | | |
| **EDUCATION** | | | |
| 2016 | **University Of South Florida,** TAMPA, FL  **Master Of Science** in Computer Science  Research Concentration: **Artificial Intelligence**  GPA : 3.7 | | |
| 2015 | **Vellore Institute Of Technology,** VELLORE, TN  **Bachelor of technology** – computer science and engineering  GPA : 3.6 | | |
| **Skills** | | | |
| **Programming Languages** | | * Python * JavaScript * SQL * AJAX * HTML5/CSS3 | * C/C++ * PHP * REST * CLIPS * jQuery |
| **FrameWorks** | | * NodeJS * AWS Cloud Stack * Scrum-Agile * Docker * Shell | * Selenium * Git * CUDA * MS Bot Framework * Service-Now |
| **Machine Learning** | | * TensorFlow * Pandas * Scipy * NLTK * Anaconda | * Keras * Sklearn * Numpy * Matplotlib/Seaborn * Jupyter |

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| **LINKS** | |
| LinkedIn | <https://www.linkedin.com/in/mehulsuresh/> |
| GitHub | <https://github.com/mehulsuresh/> |

**Work Experience**

**Bristol Myers Squibb.**

***Chatbot Developer/ Machine Learning Programmer Oct 2017 – Present***

* Built a Framework Architecture to deploy and maintain a high-performing chatbot capable of handling Enterprise Requirements. Connected easy to use front end tools to powerful backend AI to create a truly holistic environment. Performed Deep Dives into conversational data to extract detailed chatbot verbiage and to create a set of standards and policies for chatbot conversational design.
* Developed a patient event prediction model to predict Arterial Fibrillation in advance using real-time patient data with high levels of accuracy using Data Science and Machine Learning.
* Developed extensive automation platforms for reporting with python for applications such as Return on Investment analysis, Knowledge search sequence analysis, Employee scorecard reports and Feedback categorization using scalable backend engines powered by natural language processing.
* Worked with the LEAN Digital IT team to explore and evaluate innovative avenues in Machine Learning and AI for use cases in the Enterprise. Such as Patient event prediction, Image recognition, Object tracking, NLP, Machine Translation and Natural Language Generation.

**P.R. International Inc.**

***Developer Jan 2016 – May 2016***

* Worked on large scale Data Clustering, Labelling and Transformation
* Worked on the overhaul and consolidation of internal applications to incorporate latest features and design elements
* Technologies used: Python, NodeJS, HTML5, XHTML, CSS3, Javascript, Jquery, PHP, SQL, Bootstrap, .Net, AJAX

**Market Simplified Inc.**

***Software Engineering Intern April 2013 – July 2013***

* Developed a new algorithm for the analysis of raw Stock Market Data
* Created a new module for knowledge representation including charts and data presentation
* Made apps for the IOS development platform
* Technologies and Methodologies used: Objective C, R, Scrum-Agile, XML, JSON, Angular JS

**Metal Aid Engineers**

***Developer May 2012 – Aug 2015***

* Developed an application for global work scheduling with automatic catch/dispatch for tasks and an automated reporting process.
* Developed an interface to process Purchase orders and Invoices
* Worked on a Gateway Portal to handle Customer Support.
* Technologies and Methodologies used: Python, C, C++, HTML5/CSS3, javascript, PHP, SQL, jQuery, AJAX, Angular JS, Node.JS, Scrum-Agile, Git

**Projects – With Links**

[**Heart Attack Prediction**](https://github.com/mehulsuresh/Heart-Attack-Prediction/blob/master/Heart%20Attack%20Prediction.ipynb)

**Goals**

* To Predict with High levels of Accuracy the likelihood of a patient to have a heart attack based on real world datasets of patient records.
* Find the right tradeoff between reducing the number of attributes used in the prediction and the accuracy of the prediction.
* Compare all possible Classification algorithms against each other based on complexity and accuracy.
* Automate the Model Creation, Training and Testing process to achieve higher levels of abstraction.
* Automate the Hyper parameter tuning to automatically find the best parameters to tune the various Models for higher accuracy.
* Combine best performing models based on their best predictions to create an ensemble model that can further improve accuracy.

[**ProjectAsk.me**](http://projectask.me/)

* Computational chatbot using Python, PERL, PHP and JavaScript
* Works by connecting to a host of backend services such as DuckDuckGO and Wolfram Alpha to answer an extensive host of questions from various topics.

**Cloud Chatbot Framework**

* Chatbot Architecture created using Cloud services with support for NLP, Context, Bot Logic, Knowledge Creation, API, Reinforcement Learning, Multiple Endpoints, and Analytics/Dashboards.
* Prototype of a self-sustaining end-to-end, responsive request / recommendation engines for a chatbot in order to scale up into an enterprise architecture.

**Competitive Data Science**

* [**AAIA'18 Data Mining Challenge**](https://knowledgepit.fedcsis.org/contest/view.php?id=123) **-** Constructed a prediction model that can learn win chances of new decks, based on a history of match-ups between AI bots playing with similar decks.
* [**Rosbank ML Competition**](https://boosters.pro/champ_15) **–** Analysing banking transactions to predict the outflow of customers and to determine POS transactions within a moving window
* [**PUBG Finish Placement Prediction**](https://www.kaggle.com/c/pubg-finish-placement-prediction) **-** Predicting final placement from final in-game stats and initial player ratings from over 65,000 games

**Neural Networks and Deep Learning | Graduate Research Jan 2016 – May 2017**

* Scalable Deep Neural Networks with hyper-parameter optimization for classification and regression
* [Credit Card Fraud Prediction](https://drive.google.com/file/d/0B8C9vfQFzGzzR2tNU0FsWDJ4cHF4dXk0bVQwSFYyTXRJUVJj/view) Using Naive Bayes and Support Vector Machines
* Deep multi-layer convolutional neural network for image and handwriting recognition using TensorFlow.
* Seq2seq model for [Neural Machine Translation](https://github.com/mehulsuresh/Machine_Translation) (NMT) from Spanish to English implemented in Keras
* [Image Classification](https://github.com/mehulsuresh/Transfer-Learning) using Transfer Learning implementation in Tensorflow
* [Text Recognition](https://github.com/mehulsuresh/Neural-Networks/tree/master/Text%20Recognition) with Convolutional Neural Networks
* Technologies used: Python, Keras, Anaconda, Numpy, Theano, openCV, TensorFlow, JSON, XSS

**AI & Machine learning projects**

**neural networks**

* [Deep hidden layer neural networks with logistic neurons, Backpropagation, Over fitting and computation problems](https://github.com/mehulsuresh/Neural-Networks/tree/master/Advanced%20Neural%20Networks)
* [Auto Encoder and Restricted Boltzmann Machine](https://github.com/mehulsuresh/Neural-Networks/tree/master/Auto%20Encoder%20and%20Restricted%20Boltzmann%20Machine)
* [Image Recognition with complex Convolutional Neural Networks](https://github.com/mehulsuresh/Neural-Networks/tree/master/Image%20Recognition)

**Expert Systems**

* [Movie Recommendation Expert System](https://github.com/mehulsuresh/expertsystems)

**Natural Language Processing**

* [Machine Translation](https://github.com/mehulsuresh/Machine_Translation)
* User Feedback Sentiment Analysis & User Feedback Topic Modelling
* Phrase & Text Segmentation for Reporting and Analysis
* Text Classifier
* NLP Engine and Training Set Mining for Chatbots

**Other Projects**

* Recurrent Neural Networks
* Reinforced Learning
* Computer Vision
* LSTM’s

**Cross-Platform App Development | IOS & WQ Metro. Mar 2014 – May 2014**

* Predictive Health Monitor Application - Appbeans.
* Won the Guinness World Record with Microsoft for making the most apps in a day.

**Advanced Algorithm Design. | Undergrad Research and Internship Mar 2014 – May 2014**

* Developed predictive algorithms with retracement for trend analysis for my undergrad research on Numerical analysis.
* Applied the same theory during my internship to the Stock Market for back-end processing.

**Proxy Server – Comprehensive Web Development**

* Proxy servers for uninterrupted and private data usage
* Technologies used: Python, HTML5, CSS3, Google Appengine, Analytics, Adsense

**Awards**

* 2013 Guinness World Record Windows AppFest
* 2016 Winner Program-a-Bull MSDN
* 2013 2nd place Madras Institute of Tech. State level Conference
* 2012 2/350 Interrupt ’12 National Level Symposium.
* 2012 5/3000 National level programming contest
* 2014 Champion Inter College Trivia Championship
* 2007 Merit Certificate Don Bosco Egmore

**Volunteer Work**

* Big Cat Rescue – 2018 – Partner/Education Volunteer
* Greenpeace – 2016 – Member
* DB Environmental Club – 2010 - President