# Monish Godhia

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## Education

- **Birla Institute of Technology & Science** — Hyderabad, India
  *Bachelor Of Engineering in Computer Science; CGPA: 8.78/10* — *Aug. 2013 – May. 2017*
- **Shri T.P. Bhatia Junior College of Science** — Mumbai, India
  *Grade XII; Maharashtra Board of Higher Secondary Education; Percentage: 91.50* — *Aug. 2011 – May. 2013*
- **Mahindra Academy** — Mumbai, India
  *Grade X; Maharashtra Board of Higher Secondary Education; Percentage: 95.27* — *May. 2011*

## Experience

- **Oracle** — Hyderabad, India
  *Application Developer 2* — *Jun 2017 - Present*
  - **Apache Kafka:** Optimised the performance of applications using Apache Kafka as a streaming library for the logs generated by applications instead of traditional file based systems. Achieved an optimisation of about 35%. Analysed the performance of applications.
  - **Oracle ADF:** Enhanced the existing queries by modifying the view objects used in applications. Modified the existing Java parsers to generate click history logs in the form of Excel sheets and analysed them for performance.
- **Google Summer Of Code**
  *Software Developer* — *Jun 2017 - Aug 2017*
  - **Machine translation platform:** Involved in the development of open source machine translation platform called Apertium. Developed APIs using Tornado web framework in Python coupled with their client-side callers developed in HTML and Javascript. The backend was exposed as a REST service to be consumed by the client-side. Developed interfaces which enabled the users to translate texts and websites.
  - **Work:** http://wiki.apertium.org/wiki/User:Mono/GSoC_2017
- **Amazon Development Center** — Hyderabad, India
  *Software Developer Intern* — *Feb 2017 - Jun 2017*
  - **Analytics tool:** Developed a dashboard that plotted the data from a CSV file in the form of bar graphs, pie charts and tables that made analysis of the data more convenient. Made use of Javascript and d3.js along with HAML. The backend was developed on Ruby On Rails. The application was built on the MVC architecture provided by Ruby On Rails.
  - **Decision making tool:** Developed an application that mined through huge amounts of data and was used to determine the decisions of financial transactions. This application spanned across an array of tech stack - AWS Simple Storage Service (S3), AWS Simple Notification Service (SNS), AWS Simple Queue Service (SQS), AWS Redshift, Apache Hive, PostgreSQL for processing the huge chunks of data on Redshift, AWS SimpleWorkFlow for automation. Java APIs were used for the above services. The frontend of the application was developed using HTML, CSS, Javascript and AngularJS.

## Academic Projects

- **Code Profiling and Security Analysis of Code** — *Aug 2016 - Dec 2016*
  - Carried out analysis of a code through its profiling to determine the hot and cold parts of a code. The main idea was to insert random NO-OP operations at random addresses in the cold code so as to make the code more obfuscated for the attackers to interpret.
  - Developed applications in C and python that determined the vulnerable bits of the code and used tools such as valgrind, sysprof for profiling. Proposed heuristics to enhance the security of code using the Return Oriented Programming technique.

- **Gesture Recognition Using Leap Motion Controller** *Aug 2015 - Dec 2015*
  - Developed applications using the Leap Motion Controller's API in Javascript that could recognise gestures. Learnt about the Hidden Markov Model for gesture recognition. Developed an application that recognised basic hand gestures such as stop, move and the numeric gestures, an audio application that played and paused based on gestures. Made extensive use of three.js
  - The major highlight was an application that mapped the movement of index finger onto the computer screen. The coordinates of the mappings were then used to determine whether a person is suffering from a neurological disorder using the concepts of machine learning.
- **Prediction of Stock Prices using Machine Learning** *Aug 2015 - Dec 2015*
  - Used Quandl API for Python to fetch the financial data for the companies listed on S&P 500 index and used it for training the model. Tested the model on the financial statistics scraped from Yahoo Finance using beautifulsoup.
  - Trained the model using SVM and Neural Network packages provided by scikit learn in Python using features such as book value per share, debt-to-equity ratio, market capitalisation, dividends and so forth (gained knowledge of this through an elective I pursued on Stock Exchanges). Predicted the stock price range for the companies and achieved an accuracy of about 75%.
- **Google Code For India - Route Optimiser** *Aug 2014 - Dec 2014*
  - Worked on the project initiated by Google aimed to optimise the route planner of a food delivery system for a mid-day meal program - AkshayPatra. Learnt about the Google Maps APIs such as geocode, distance matrix and directions services to accurately determine the travel time and driving distance for a given matrix of coordinates. Optimised the Travelling Salesman Problem and plotted the solution on Google Maps.
- **Other Projects** *2014 - Present*
  - Built applications using OpenCV in Python such as face and body detection, detection of an object in a video and an image search engine.
  - Developed websites for college fests using HTML5, CSS3, Javascript, Jquery along with javascript frameworks such as AngularJS. Used backend tools like PHP, Django. Learnt about the UX concepts for elegant User interfaces.

## Programming Skills

- **Languages:** C, C++, Python, Java, HTML5, Javascript, SQL, Apache Kafka, Amazon Web Services (AWS), Scikit Learn, OpenCV, Pandas, Matplotlib, Numpy, d3.js, dc.js

## Position of Responsibility

- **Core Member at Computer Science Association, BITS:** Organised and managed events and workshops. Lead the paper presentation event with a participation of almost 500. Successfully conducted workshop on Linux and Mozilla hackathon with a participation of almost a 1000.
- **Developer at Department Of Technical Arts, BITS:** Developed applications and websites for fests. Conducted workshops to teach the juniors the concepts of web development.
- **Designer at Department Of Arts & Deco, BITS:** Designed Taj Mahal as a 3D street projection and developed street art during cultural fest.

## Honors & Achievements

- Among top 1200 students from around the world to be selected for Google Summer of Code program.
- Secured awards for 5 consecutive years at school level and an award at high school level for outstanding academic performance.
- Gold medalist in International Math Olympiad in 2012 and silver medalist in International English Olympiad in 2011.
- Accepted into BITS Pilani, a premier engineering institute in India with a selection rate of less than 1% every year.
- World rank of 30 on the Interviewbit platform. Secured a bronze medal for an online coding competition on Hackerrank platform.

## Hobbies & Interests

- Football, Music, Travelling, Reading blogs on Machine Learning and Human Computer Interaction, Sanskrit recitation

## Volunteer Experience

- Volunteered for the welfare and education of underprivileged children through Teach For India campaign.
- Took up evening classes for the underprivileged children in the vicinity of my residency in Mumbai; provided them with books and clothes.