

# Niraj Goel

<http://www.nirajgoel.in>

Email : niraj.goel03@gmail.com

302 Ball Street, L312

College Station -77840, TX

Mobile : (979)-739-8021

## EDUCATION

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**Texas A and M University**, College Station, TX

- *Master of Science in Computer Science*

May 2019

GPA: 3.67/4

**PES Institute of Technology**, Bangalore, India

- *Bachelor of Computer Science and Engineering*

Aug. 2011 - May. 2015

GPA: 8.68/10.0

## PROGRAMMING SKILLS

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- **Languages:** Python, C++, Perl, SQL, Javascript
- **Technologies:** Unix, Make, SVN, GIT, Jenkins, scikit-learn, Pandas, Caffe, Constraint programming

## PROJECTS

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- **Music Recommendation system:** Implemented a recommendation system for playlist continuation using Spotify million playlist dataset. Used artist based collaborative filtering and bag of words model. Technologies: Python, Numpy, Pandas.
- **Object detection in Haze:** Adapted state of the art object detection architectures like Faster-Rcnn, SSD (VGG/Resnet) for object detection in hazy images(RESIDE dataset). Combined a CNN based dehazing model with mentioned object detection models. Technologies : Caffe, Tensorflow
- **Optimized widest path Algorithms:** Implemented and analyzed the performance of *Dijkstra's and minimum spanning tree* algorithms for finding maximum bandwidth path (widest path) in sparse and dense graphs. Technologies: Algorithms, Python.

## PUBLICATION

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- N. Goel, T. Chaspari, B. Mortazavi, T. Prioleau, A. Sabharwal, R. Gutierrez-Osuna, " **Knowledge-Driven Dictionaries for Sparse Representation of Continuous Glucose Monitoring Signals,**" IEEE Eng. in Medicine and Biology Conference (EMBC), July 2018

## EXPERIENCE

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- **Mathworks** Natick, USA  
*Software Developer Intern, Fixed Point Designer group* May 2018 - Aug 2018
  - Prototyped Simulink Edit-time checks for efficient fixed-point code generation.
  - Implemented Model advisor checks for efficient fixed-point code generation.
  - Prototyped automatic fixed-point data type suggestions using constraint solver (Gecode).
  - Technologies: C++, Simulink, Matlab, Constraint Programming, Solvers, Code generation, Fixed point design.
- **ARM** Bangalore, India  
*Software Engineer, Architecture and Technology group* Jan 2015 - July 2017
  - Owned the Development and Deployment of the Architecture Resource Configuration Interfacing(ARCUI) tool.
  - Developed a framework to implement and deploy Architectural Checkers and Profilers for the Architecture Validation Suite (AVS).
  - Developed and Maintained software tools for running, reporting and configuration of Architecture Validation Suite.
  - Mentored 2 interns and facilitated the ramp-up of new team members.