

Nikhil Sulegaon

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EDUCATION

- University of Colorado Boulder** Boulder, CO
 - Master of Science in Computer Science; expected May 2019* *Aug 2017 – Present*
 - Relevant courses: Machine Learning, NLP, and Object Oriented Analysis & Design Patterns*
- BMS College of Engineering** Bangalore, India
 - Bachelor of Engineering in Information Science and Engineering; GPA: 8.92/10.0* *Sep 2011 – May 2015*
 - Relevant courses: Data Structures using C, Design and Analysis of Algorithms, Operating Systems and Databases*

PROGRAMMING SKILLS

- **Languages:** Python, C#, Ruby, Java, C++, and JavaScript.
- **Frameworks:** Keras, Theano, Tensorflow, ASP.NET, Flask, Ruby on Rails, SpringMVC, ReactJs with Redux.
- **Databases:** MS SQL Server, Postgres, MySQL, and MongoDB.
- **Electronic Prototyping:** Arduino, Raspberry Pi, BeagleBoard, ARM mbed.

EXPERIENCE

- University of Colorado Boulder** Boulder, CO
 - Teaching Assistant - Software tools and methodologies* *Sep 2017 - Present*
 - Teaching an industry focused course providing intensive training to a group of 60 students per semester.
 - This course focuses on building applications using core Agile principles and Test Driven Development.
 - This position also involves guiding and advising students on their academic and personal projects.
- ThoughtWorks - A staunch Agile company focused on quality of its deliverables** Bangalore, India
 - Application Developer* *Aug 2015 - Aug 2017*
 - Developed software using Agile practices like Test Driven Development, Continuous Integration and Delivery.*
 - **Project Management Web Application**(for the largest consulting firm in the world): Predominantly worked on building a robust backend through TDD using C#. Applied appropriate refactoring techniques to a legacy code base and increased the test coverage from 16% to 65%. Contributed heavily to optimizing extremely complex SQL queries thereby improving the performance of many key features by around 80%.
 - **Food-Supplies Management:** Worked on a stock management tool to help the pantry of the office plan fruits, vegetables and grocery supplies better in order to minimize wastage of food. This tool was built using the *sklearn* and *keras* libraries in Python.
 - **Danglay:** Built a scalable carpooling web application using Ruby on Rails to solve the problem of commute faced by numerous employees at ThoughtWorks.
- FreeLancing - Embedded System Prototyping** Bangalore, India
 - Designed electronic prototypes of various Assistive Technology and Home Automation devices.* *Oct 2014 - June 2015*
 - **EMG Controlled Wheelchair:** A wheelchair which was controlled by an electromyograph, aimed at helping paraplegic patients move around. This system also housed a voice recognition unit that could steer the wheelchair.
 - **Household Security System:** Security system that provided live video-stream of the house under surveillance over the internet onto the owner's smartphone. The owner could also control the entrance gates of their house.

PROJECTS

- **Object 3D Pose Estimation:** Using Neural Nets to deduce a dynamic object's 3D location(x, y, z) and rotation(roll, pitch, yaw). This information is piped to an AR head-mounted display to generate real and virtual object interactions. **Links:** *Demo, Paper(Report), GitHub.*
- **Navisys:** Designed an embedded system, fitted into a wearable jacket, that provided turn-by-turn navigation with dynamic obstacle detection to visually impaired users. Ultrasonic sensors - the crux of the obstacle detection unit, were later replaced by a Convolution Neural Net to increase performance by 20%.
- **Teacher's cube:** Electronic mnemonic cubes, representing alphabets of a language, smart enough to pronounce the word formed when arranged one beside the other. Aimed to help dyslexic children formulate and pronounce words.

ACHIEVEMENTS

- Won the 'Best Research Project' award at the IEEE International Advance Computing Conference 2015, held at B.M.S College of Engineering. The project also featured in the local newspaper for its novel approach of implementation.