Nikhil Sulegaon

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EDUCATION

- **University of Colorado Boulder** — Boulder, CO
  Master of Science in Computer Science — *Aug 2017 – Present*
  Relevant courses: Machine Learning, NLP, Probabilistic models for Machine learning, and Computer Vision.

- **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#, Java, Ruby, C++, C, PHP, and NodeJs.
- **Frameworks**: Keras, Theano, Tensorflow, ASP.NET, Flask, Ruby on Rails, SpringMVC, ReactJs with Redux.
- **Databases**: MS SQL Server, Postgres, MySQL, and MongoDB.
- **Others**: Android, Git, AWS, Heroku, CI, Docker, HTML/CSS, JavaScript, Shell scripting, and Powershell.

EXPERIENCE

- **University of Colorado Boulder** — Boulder, CO
  Teaching Assistant - Software tools and methodologies — *Sep 2017 - Present*
  - Teaching 60 students, full stack development and deployment of applications using core Agile principles and TDD.
  - Training students on technologies like Shell Scripting, HTML/CSS, JS, Git, REST, MySQL, PHP, CI, and Heroku.
  - 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 Tool(C#, Silverlight, ASP.NET)**(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 to optimizing extremely complex SQL queries thereby improving the performance of many key features by around 80%.
  - **Food-Supplies Management(Python, Sklearn, Keras)**: Worked on a stock management tool to help the pantry of the office plan the supply of fruits, vegetables, and grocery better in order to minimize wastage of food.
  - **Danglay(Ruby, Ruby on Rails)**: 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(Arduino, C)**: A wheelchair which was controlled by an electromyograph, aimed at helping paraplegic patients move around. This system could also be controlled by a voice recognition unit.
  - **Surveillance System(Android, Python, C)**: Security system that enabled the owner to control the entrance gates and lockdown his/her house. This system also provided live surveillance of the house on a smart-phone.

PROJECTS

- **Object 3D Pose Estimation(Python, Tensorflow, Unity)**: 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(Java, Android, Python, C, OpenCV)**: 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%. **Links:** *Paper(Report)*
- **Teacher's cube(Python)**: Electronic mnemonic cubes, representing alphabets of a language, that pronounced 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.