

# APOORV SINGH

[apoorvs@cs.cmu.edu](mailto:apoorvs@cs.cmu.edu) | (412) 708-4998

[www.apoorvsingh.com](http://www.apoorvsingh.com) | [www.linkedin.com/in/apoorv93singh](https://www.linkedin.com/in/apoorv93singh) | [www.github.com/singaporv](https://www.github.com/singaporv) | Skype: singaporv

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## EDUCATION

### Carnegie Mellon University – School of Computer Science – Robotics Institute

Pittsburgh, PA

Masters of Science Robotic Systems Development – GPA: 4.0

Aug 2018 – May 2020

Relevant Coursework: Computer Vision (Advanced); Deep Learning; Visual learning and Recognition; Systems Engineering

### Delhi Technological University (DTU)

New Delhi, India

Bachelor of Technology in Mechanical Engineering – GPA: 8.56/10 (95 percentile)

Aug 2011 – June 2015

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## PROFESSIONAL EXPERIENCES

### Vera

Pittsburgh, PA

Co-Founder

Dec 2018 – Present

- Developing deep learning based NLP tool for making Meetings/Court Hearings more productive on Python - [www.verassist.com](http://www.verassist.com)
- Key features are voice recognition, audio trigger, audio search, summarization, MOM generation and reminder setting
- Participated in various business competition and received great feedbacks from various advisors

### Carnegie Mellon University – School of Computer Science

Pittsburgh, PA

Research Assistant

Jan 2019 – Present

- Developing python based OCR tool to convert bill/statement image into a text representation for easy information interpretation
- Handling privacy issues associated with personal information of customers, also making this application to run in real-time
- Skills used are modern cloud computing, computer vision, NLP, deep learning and Image processing

### Maruti Suzuki India Limited, Gurgaon

Haryana, India

Assistant Manager, Research and Development

July 2015 – July 2018

- Implemented Autonomous Level 3 features (Lane keeping etc.) in partnership with Toyota for Suzuki's first Electric vehicle
- Developed camera based smart bots to automatically detect parts from the conveyer belt using Deep Learning
- Coordinated SAE national level events – SAE-Efficycle, SAE conferences etc. Took part in various organizational trainings

### Switch Mobility

New Delhi, India

Co-Founder

Oct 2016 – March 2018

- Founded a Smart and Green mobility solutions provider venture: [www.switch-mobility.com](http://www.switch-mobility.com)
- Developed various solutions for present automobile problems related to traffic, pollution and costs of ownerships

### SOS Children's Village and Rashtriya Vidhyalaya Sangathan:

Delhi, India

- Tutored and motivated children. Guided on topics like Computer skills and career paths

May 2013 – July 2018

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## PROJECTS

### Detection and Response to On-coming Vehicles in Potential Crashes, Capstone Project – Carnegie Mellon University

Pittsburgh, PA

- Developing a reliable high speed on-coming collision prevention software for Trucks on country side roads Sep 2018 – Present
- Currently working on real-time vehicle detection and estimating its position and velocity vector to provide to planning team
- My Responsibilities are Sensor-data fusion, Perception and Prediction subsystem <http://mrsdprojects.ri.cmu.edu/2018teama>

### DTU Supermileage (Delhi Technological University)

Delhi, India

- Led a College-team of 26 students for designing and manufacturing of fuel efficient 3 wheeled vehicle Oct 2011 – June 2015
- Deployed & programmed Electronic Fuel Injection (EFI) and designed outer shell of vehicle on SolidWorks and ANSYS
- Achieved outstanding positions in Sell Eco-marathon, Manila, Philippines (Fuel efficient vehicle building competition)

### Pipeline Crack Detection Robot, Capstone project, DTU

Delhi, India

- Developed a robot for detecting internal cracks (Edge detection algorithm) in inaccessible pipelines July 2014 – June 2015
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## PATENTS

### Filed following patents as a Co-Founder of Switch Mobility

Oct 2016 – March 2018

- Patent application no.: 201711041591, titled "Artificial intelligence powered smart traffic lights" New Delhi, India
  - Patent application no.: 201711041579, titled "Potholes detection mechanism"
  - Patent application no.: 201711041590, titled "Artificial intelligence-based vehicle insurance score provider"
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## SKILLS

**Programming Languages:** Python, C++, C, MATLAB

**Application software:** OpenCV, PyTorch, TensorFlow, Keras, AWS, Linux, ROS, GitHub, Docker, Cloud Computing, SolidWorks, MakerBot