

# HANS KUMAR

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## EDUCATION

**Carnegie Mellon University** Pittsburgh, PA

B.S. in Mechanical Engineering, May 2019

Additional Major in Robotics

GPA: 3.57/4.0

**Spring-Ford High School** Royersford, PA

High School Diploma, June 2015

GPA: 100.925/100.000

## WORK EXPERIENCE

**Undergraduate Research Fellow** Pittsburgh, PA

CERLAB Carnegie Mellon, Summer 2016

- Designed and engineered practical surgical models for the training of medical residents and medical device testing using novel fabrication techniques
- Interacted with several surgeons, residents, and researchers at Allegheny General Hospital for validation on different aspects of the 3D printed models

**Team Children** Collegeville, PA

Volunteer Tech, Summer 2014

- Refurbished old computers by updating software and hardware
- Donated computers to children at underprivileged schools

## PROJECTS

**UAV Computer Vision Project**, Summer 2016

- Collaborated in a CERLAB research group to develop software that could potentially allow a drone to detect cracks along water tunnels in Japan
- Researched and implemented different segmentation techniques to help drone accurately detect areas of road and grass

**15-112 Term Project**, Spring 2016

- Coded an interactive drum tutor and audio visualizer that was designed to help drummers learn and create different beats
- Presented project to peers as one of the top fifteen showcase presenters

**Mousetrap Car Project, Carnegie Mellon University**, Fall 2015

- Built a small car using CAD software and laser cutting techniques that could travel 15 feet forward and 15 feet backwards with only the power of a Mousetrap
- Worked with a team and made several improvements to the design of the car

## LEADERSHIP

**Networking Chair for CMU OM**, 2016-Present

- Reached out to speakers and other organizations to coordinate major cultural events for the Pittsburgh's South Asian community

**Center Snare of Spring-Ford Marching Band**, 2012-2015

- Managed tempo across entire marching band of 120 students
- Helped to guide new members and maximize rehearsal process as percussion section leader

## SKILLS

**Software:** Python, C, Matlab, SolidWorks, Creo Pro/E, Meshlab, Blender, Basic HTML/CSS

**Machines:** 3D Printer, Mill, Laser Cutter, Lathe, DIY Fabrication

**Language:** Conversant in Hindi

## ACTIVITIES

CMU Bhangra, Fall 2015-present

CMU OM, Spring 2016-present

Phi Delta Theta Fraternity, Spring 2016-present

Carnegie Mellon Racing, Fall 2016-present

## HONORS

World Championship with Reading Buccaneers Drum and Bugle Corps, Summer 2015

Dean's List, Fall 2015