



# AKASH V

## MECHANICAL ENGINEER

VELLORE INSTITUTE OF TECHNOLOGY  
CHENNAI , INDIA

### PROFILE

A passionate and organized Mechanical Engineer seeking every possible opportunity to expand his knowledge.I have a keen understanding of concepts which are stem from my smart work and dedication.

### CONTACT INFORMATION



akash.v2018@vitstudent.ac.in  
akashvenkateswaran@gmail.com



8838398250  
7868947266



Akash Venkateshwaran



<http://akashvenkateshwaran.me/>

## ACADEMIC BACKGROUND

YEAR	DEGREE	INSTITUTION/BOARD	CGPA/PERCENTAGE
2018-Present	B.Tech Mechanical Engineering	VIT Chennai India	9.58
2018	Class XII CBSE	BVM Global Coimbatore India	91%
2016	Class X CBSE	BVM Global Coimbatore India	9.4

## INTERNSHIPS AND INPLANT TRAINING

India Connect@NTU August-December  
Nanyang Technological University  
Singapore 2021

### FEM INVESTIGATION OF SPLIT HOPKINSON PRESSURE BAR

Dynamic analysis of various specimens in Split Hopkinson Pressure Bar and modeling in ANSYS/LS-DYNA to investigate the effects of different parameters.

MITACS June-August  
York University  
Toronto 2021

### NUMERICAL INVESTIGATION OF TURBULENT STRUCTURES & AIR ENTRAINMENT IN POSITIVE SURGE WAVES

Large Eddy Simulation of surge waves to understand the turbulence and air entrainment which has adverse effects on both environmental factors as well as human safety factors.

National Cheng Kung University  
September-March  
2020-21

### MACHINE LEARNING FOR THE ESTIMATION OF CANCER CELL INVASION

Apply machine learning and deep learning algorithms for classification, segmentation and tracking of the cell images from 3D cancer spheroids at matrix interface.

Yuan-Ze University  
April -June  
2020

### MACHINE LEARNING FOR FLUID MECHANICS

Velocity prediction model around a cylindrical surface by feeding pressure contours data into a Deep Neural Network.

Guindy Machine Tools LTD  
Chennai  
May  
2019

### MACHINING PROCESS IN MANUFACTURING

Inplant training on different manufacturing processes that includes both manual and CNC machines.General Idea on stages involved in the manufacturing of Jaw chucks.

## PROJECTS

Mini Robots	Law and Line Following Robot, Obstacle Racer, Robo-Soccer, Maze Runner, Sumo Robot, RC Nitro Cars, BattleBots
Archimedes Spiral Wind-Turbine	Numerical simulation and development process of wind turbine prototype using additive manufacturing techniques
XRAY Detection	Neural Network to identify and differentiate 14 types of chest disease using the dataset collected from NIH

## RESEARCH PAPERS

- Numerical Investigation of **Turbulent Structures** and Air Entrainment in Positive **Surge Waves**
- Numerical Study of the effect of geometry on the behaviour of **Internally heated Melt pool** with Eutectic Salt
- Stress analysis of a **Regenerative Flow Compressor** and Pump based in **Fluid-Structural Coupling**
- Development of a **Flame Shield** for use in Domestic Gas Stoves
- Review on Emission Control using **Split Injection System** in **LTC** Engines
- Numerical Analysis of **Buckling** in Rectangular Plates with Different Cut-outs

## ACHIEVEMENTS AND CERTIFICATIONS

- Fourth Rank in Mechanical Department at **VIT Chennai** during the year 2018
- Eighth Rank in Mechanical Department at **VIT Chennai** during the year 2020
- Acquired **CSWA** certification
- Runner up of **Chennai International Youth Fest** 2019
- Winner of **Electrofocus** 2020 at **MIT, Chennai**
- Top 5 in Law Follower event at **ATMOS 2019, BITS Pilani**
- Winners of Line Follower at **EMFISIS 2020, KCG College Of Technology**

## WORKSHOPS

- Online National Workshop on **OpenFOAM 2021**
- **ISHRAE** Workshop on Energy Simulation and CFD Analysis in Building 2020
- Workshop in **AMZ Automotive** 2019
- Workshop on **Hybrid Car Design** 2019

## SKILLS/SOFTWARES:

<b>Design Tools</b>	Ansys OpenFOAM SolidWorks Fusion360
<b>Programming Tools</b>	C Python C++ Java Tensorflow OpenCV MATLAB YOLO
<b>Other Tools</b>	Cura Ultimaker Weka Fiji ImageJ
<b>Basic Softwares</b>	Microsoft Word PowerPoint Excel LaTeX Overleaf

## POSITIONS OF RESPONSIBILITY:

Robotics Club	Programming Lead of ATOM Robotics (Official Team at VIT, Chennai)
National Service Scheme	Member of NSS which is government-led community service activities & programs.
Vibrance'19	Organized and administrated event
ISHRAE	Active Member in Indian Society of Heating Refrigeration and Air-Conditioning Engineers