Karthick Vel K

@ karthick.15je001770@mme.ism.ac.in linkedin.com/in/kkarthick12 +91 9488647909 **Skype:** kkarthick12
Indian Institute of Technology(ISM), Dhanbad, India

Education

2017-Present — Indian Institute of Technology(ISM), Dhanbad, Bachelor of Technology
Minor in Computer Science Engineering
Design of Algorithms | Computer Organisation | Operating Systems | Database Management Systems

2015-Present — Indian Institute of Technology(ISM), Dhanbad, Bachelor of Technology
Honours in Mining Machinery Engineering
- **GPA:** 8.07/10

Kinematics of machines | Dynamics of machines | Material Science | Electronics and Instrumentation | Electrical Machines

Professional experience

May 2018-July 2018 — Research Intern, Volvo Trucks India Division - VE Commercial Vehicles
- Invented a new feature(fully working prototype) in Volvo Tree Transplanter to measure/give remote access to site conditions.
- Added features in regression to predict survival rate of tree.

Raspberrypi | Arduino | Python | R | SQL | ShinyR | Tableau | Flask

December 2017 — Winter Trainee, Bharat Coking Coal Limited - Sinidih Workshop
- Obtained experience on assembly of a Dumper

AutoMobile

June 2016 — Project Trainee, Mold Masters Technologies, Milacron Group of Companies
- Learnt advanced Machining Techniques and to program 3-axes CNC machines.

CNC Programming

Courses

Control of Mobile Robots	**Valid from:** Dec. 2018 **Verification code:** JK3DY4BGBBVQ
Convolutional Neural Networks	**Valid from:** Dec. 2018 **Verification code:** RJYDPAL6WT9N
Deep Learning	**Valid from:** Oct. 2018 **Verification code:** N2UL66V63VNR
Data Scientist's Toolbox	**Valid:** Jan. 2018 **Verification code:** X2MN25WXKU62
Data Science with R	**Valid:** July 2017 **Verification code:** UC-J6VJ9PIG
ANSYS(Structural and Thermal Analysis)	**Duration:** 1 month (June 2017) **Central Institute of tool Design**,Hyderabad **Verification code:** 01414/17-18
CATIA(Modelling, Assembly and Drafting)	**Duration:** 1 month (June 2017) **Central Institute of tool Design**,Hyderabad **Verification code:** 01484/17-18
Parallelism in Intel Architecture	**Coursera**
Data Analytics Nanodegree - Udacity	**Udacity**
Analytics Edge	**EdX**

Projects

January 2019 — Simulation of Obstacle avoidance and Go to goal of an autonomous differential mobile robot, Self
- Used sliding mode control to optimise the control of a mobile robot

MATLAB

December 2018 — Gesture controlled RC car, Self
- Used Accelerometer to drive a mobile robot

Arduino

December 2018 — Implementation of YOLO v2 algorithm in traffic lane., Self
- Practiced implementation of convolutional neural network.

Neural Networks | Python | Numpy

November 2018 | **FEM Analysis of Formula 1 Wing, Self Academic**
- Determined drag and lift of aero foil for 1 cm wide formula 1 wing.

CATIA ANSYS

October 2018 | **Built a line follower, Edge and Wall Avoidance robot., Self**
- Added GSM module to make it RC

Arduino

October 2018 | **Cat Classifier, Self**
- Created multi-layer neural network and compared within its cost vs iterations.
- Test set Accuracy of **0.8**

Neural Networks Python Numpy

April 2017 | **FEM Modelling, Real time animation (Digital Mockup), Static structural and Modal analysis of an engine block, Self Academic**

CATIA ANSYS

November 2017 | **FEM Modelling of Analysis of drive shaft in automobile, Self Academic**
- Comparison illustrated with High Speed Steel and Carbon Fibre.
- Reduction of weight upto 25% was achieved with 10 times increase in tensile stress was observed.

CATIA ANSYS

March 2017
April 2017 | **Finite Element Based Design optimization of Mining dragline cluster, Academic**
- Analysed residual stresses caused by welding in the clusters by varying weld fillet radius, main chord and lacing tubular thickness.
- Optimised parameters were found from the results to minimise the stress.

ANSYS

January 2016 | **Prototype of ranking through Joint Seat Allocation Authority of India, Self**
- Web Interface was provided with PHP and HTML.
- Details of the students were stored in MySQL database.
- Seat allocation was done through Python.

Python MySQL PHP HTML

Competences

Programming	R, Python, Kotlin, C, C++, CNC Programming, SQL, LaTeX
Development Platforms	Arduino, Raspberry pi, Intel Movidius
Operating Systems	Debian, Arch, Windows
Data analysis	Pandas, Numpy, Jupyter notebooks, Scrapy, Regex
Other tools	CATIA, ANSYS, AutoCAD, Microsoft Excel
Web applications	Tableau, ShinyR, Flask

Languages

English	●●●●○
Tamil	●●●●○
Hindi	●●○○○
German	●○○○○

Strengths

- Inquisitive
- Self-starter
- Intuitive
- Critical Thinking

Interests

- Reading Non-fiction
- Formula 1
- Learning new things
- Cyber Security