

To understand the real world applications and implementations of the engineering principals learned during graduation and other courses. Committed and motivated with decision making skills. Proficient at quick learning new procedures and technologies and a collaborative team player.

## ➤ EDUCATIONAL DETAILS

Program	Duration	Institute	Grade
Quantum Computing	2020 - current	IBM Quantum and The Coding School	Yet to appear
Bachelor in Engineering (BE)	2015 - 2019	PVG COET, Pune	8.63/10 GPA
12 <sup>th</sup> Grade	2014-2015	KHS, Pune	86.67%
10 <sup>th</sup> Grade	2010-2011	P Jog High School	88.36%

## ➤ SKILLS

Quantum computing language – Qiskit, Penny Lane  
Other programming languages – Python, C, Cpp, MatLab, Arduino programming language  
Libraries in Python – OpenCV, TensorFlow, PyCUDA, NUMBA, PyDICOM  
Medical Imaging software – Slicer3D  
Solid Modelling and Analysis Software – Solidworks, Inventor, ANSYS, Catia

## ➤ EXPERIENCE

<b>Research Internship in Autonomous Robotics Surgery under, Rakesh Sharma</b> Working on the Medical Imaging part of the Autonomous Robotic Arm in modality of CT (Computed Tomography) and X-Rays for Image registration of real time images of CARM with the CT scans. Developed and optimized the algorithm for DRR (Digitally Rendered Radiographs) Generation and reduced the execution time using Parallel Computing techniques in Python, like NUMBA and PyCUDA.	Feb 20 – July 20
<b>Tata Consultancy Services (TCS)</b> Worked on Virtual Reality development in Revit for environment generation in VR for medical applications.	July 19 – Dec 19
<b>Volunteering Program 2019</b> Experience in volunteering in “Swachhata Hi Seva” organized by TCS. It was a great initiative to promote cleanliness and awareness against human impact on environment.	Sept 19 – Oct 19
<b>Research Thesis of 3D printing of non-plastic material under, Manish Nagoshe</b> I was working on the programming part of the printer. Implemented various control logic on the microcontroller.	July 18 – May 19
<b>Individual Research in Detection of Skin Tumor</b> Developed a Machine Learning algorithm for detecting whether the cancer is benign or malignant. I learnt and implemented different ML techniques to increase the accuracy including various hyperparameter optimization techniques.	Jan 18 – June 18
<b>Research in Retinal Optical Coherence Tomography under Dr. Naresh Jaiswal</b> Developed a Machine Learning algorithm for detecting probability of cause of visual impairment and thus helping in avoiding it in the near future. Reached an accuracy of 95%. This can be widely reduce the precious time of ophthalmologist and cost effective to patients by preventing the disease instead of curing it.	July 17 – Dec 17

## ➤ AWARDS AND PUBLICATIONS

Secured **National Level 4<sup>th</sup> rank in Quantum Computing** challenge organized by IBMQ. Developed a fully functional Variational Quantum Classifier (VQC) algorithm and executed on IBM quantum computer for classifying Images with higher accuracy.

Chapter on ‘**Cognitive Computing in Autonomous Vehicle**’ in collaboration with Dr. Mamta Mittal and IIIT Delhi Professors, to be published in peer reviewed Elsevier Journal. Expected publication date is around May 2021.

Developed a **Quantum Lights Out solver**, using Quantum Grover’s Search, plan on publishing the algorithm in peer reviewed Elsevier Journal.

I was awarded **IBM Quantum Digital Badge** for problem solving using Quantum Algorithm and executing them on quantum computer in ‘IBM Q challenge 2020’ conducted globally.

➤ **OTHER PROJECTS**

Bionic Arm - This project was mainly based on the principle that electric impulse generated in our muscle causes the muscle movement. My task was to program Arduino interfacing with EMG sensor and actuate the servo motors in required fashion. From this project I got an experience in Arduino programming and interfacing sensors with the micro controller.

➤ **CERTIFICATION AND CO-CURRICULAR**

Certificate in 'C language '.

IBM Certification of 'Python for data Science'.

Certification in 'Control of Mobile Robots' by Georgia Tech University.

IBM Certification of 'Introduction to Artificial Intelligence'.

'Artificial Intelligence' by TCS (Course ID: 51708)

Certification in Machine Learning by Stanford University by Andrew Ng.

'Introduction to TensorFlow for AI, ML and Deep Learning' by deeplearning.ai.

'Convolutional Neural Networks in TensorFlow' by deeplearning.ai.

I do hereby declare that all the information mentioned above is true to the best of my knowledge.

Date – 18-03-2021

Place – Pune