



# **Mech'Časopis**

**Edition 7**  
**September, 2021**

# Mech'Časopis

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## **About the Department of Mechanical Engineering**

The Department of Mechanical Engineering was started in the year 2005 offering the Bachelor's Degree under Anna University and Post Graduate Degree of Master of Engineering in Manufacturing Engineering in the year 2012. The Department has 20 faculty members, who are highly qualified in different areas of specialization and dedicated their profession for the students. Amongst that, 6 faculty members hold the Doctorate Degree and 3 faculty members were recognized as supervisors for guiding Ph.D.

The Department is nourished with the modern equipment and computing facilities with the latest version of software viz., ANSYS, SOLIDWORKS, Femap Nastran, NX CAD CAM CAE, MASTERCAM and AutoDesk Inventor. Value added courses are provided for the students. Our department is an Anna University recognized Research Centre.

### **About Mech'Časopis**

The name Mech'Časopis is taken from the Croatian language; Časopis (Pronounced as Chasopis) means Newsletter. This newsletter brings the outline of the students and faculty achievements with the activities of the department.

# Mechanical Engineering

## Vision

To make Department of Mechanical Engineering the unique of its kind in the field of Research and Development activities in the prominent field of Mechanical Engineering in this part of the world

## Mission

To impart highly Innovative and Technical Knowledge in the field of Mechanical Engineering to the urban and unreachable rural student folks, through "Total Quality Education".

## Program Educational Objectives

PEO1 - Graduates of the Programme will excel in Technical Knowledge and Apply Innovative Skills in the field of Mechanical Engineering.

PEO2 - Graduates will contribute to Technological Development and Research Activities through "Total Quality Education".

PEO3 - Graduate of the Programme will accomplish Leadership Qualities and Social Responsibilities through "Life Long Learning".

## Program Specific Outcomes

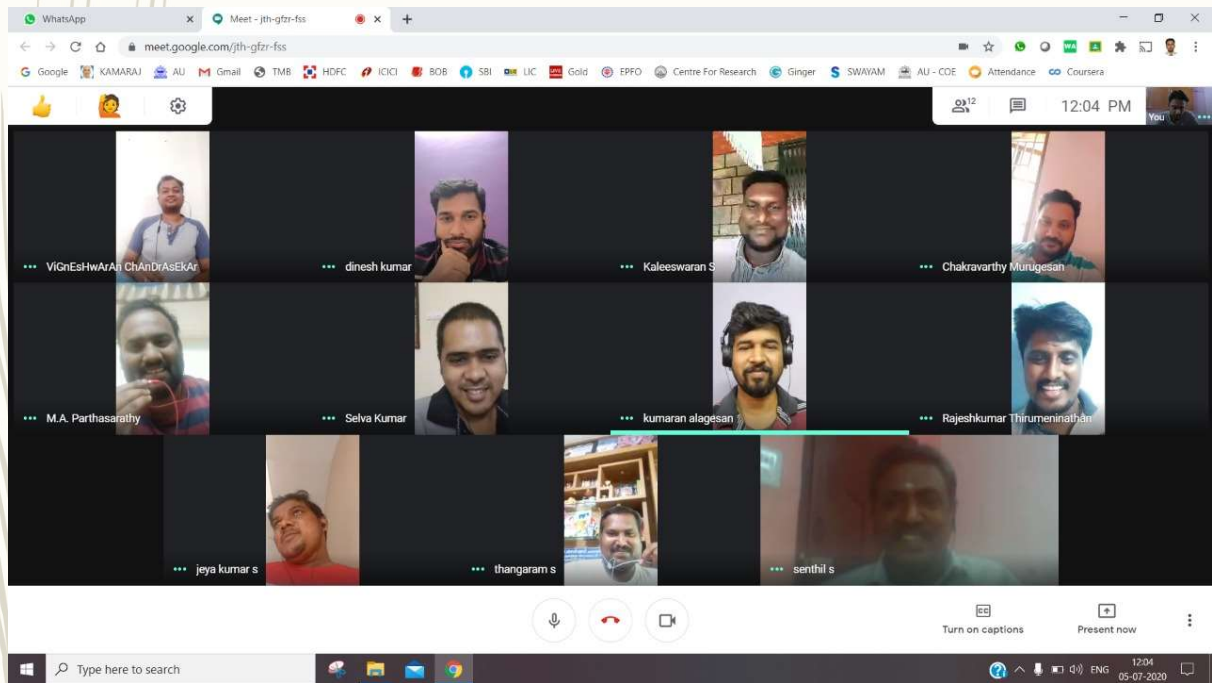
PSO1 - Graduates will be able to create and analyse the Research and Development activities related to design and manufacturing.

PSO2 - Graduates will be able to design, develop need based products in Mechanical Engineering and allied Industries.

# Events Organized

S. No.	Date of Event	Name of the Event
1	02/07/20	Online Teaching made easy webinar series, "Near Pod"
2	05/07/20	Virtual Alumni meeting "MECH GEARS 2009 & 2010"
3	15/07/20	Online Teaching made easy webinar series, "Google Jamboard"
4	20/07/20	Project Presentation Contest for Polytechnic Mechanical Students
5	23/07/20	Online Teaching made easy webinar series, "Educational Video Creation (Using Mobile Apps)"
6	30/07/20 to 31/07/20	Online Seminar on "Online Teaching Made Easy" (For Polytechnic Faculty Members)
7	11/08/20	Online Seminar on "How to apply online for Lateral Entry Counselling"
8	15/08/20	Art of Parenting
9	08/10/20	Online webinar on "Non Destructive Testing- Methods and Applications"
10	20/07/20	Project Presentation Contest for Polytechnic Mechanical Students

# Events Organized



# Events Organized

S. No.	Date of Event	Name of the Event
11	24/11/20	Employability skills and Opportunities in HVAC&R Industry
12	09/02/21	Opportunities in Digital Marketing
13	10/02/21	Online seminar on "Opportunities in HVAC"
14	01/02/21 to 06/02/21	Organized AICTE sponsored STTP on Make in India Through 3D Printing and Industry 4.0 for Indian Industries
15	06/03/21	Workshop on Entrepreneurship Opportunities in Solar Technology
16	08/03/21	Guest Lecture on Opportunities in Banking Sector
17	12/04/21 to 16/04/21	STTP on Make In India through 3D printing and Industry 4.0 for Indian Industries
18	15/05/21	Webinar on Orientation Programme and Technical talk on Refrigeration Basics, Applications and Opportunities

# Events Organized

S. No.	Date of Event	Name of the Event
19	03/05/21 to 08/05/21	STTP phase III- Make in India through 3D printing and industry 4.0 for Indian Industries
20	14/06/21	Polytechnic E-Quiz event
21	14/06/21 to 19/06/21	STTP Phase IV - "Make in India: Through 3D Printing & Industry 4.0 for Indian Industries"

The screenshot shows a Microsoft Teams meeting interface. The main content is a promotional poster for a guest lecture. The poster text is as follows:

**KAMARAJ**  
COLLEGE OF ENGINEERING & TECHNOLOGY  
An Autonomous Institution (Established in 1983)  
APJ Abdul Kalam Centre for Innovation & Entrepreneurship  
Department of Mechanical Engineering  
(Accredited by NBA, New Delhi)

organises  
Guest lecture on  
**NON DESTRUCTIVE TESTING -  
METHODS AND APPLICATIONS**

**October 08, 2020**

**Guest Speaker**  
Dr.R.Arul Kumar M.E.,Ph.D..  
Centre Head, Mathira NDT Training Institute,  
Pavoorchatram

**We Cordially Invite you all!**

At the bottom of the poster, it says "SANKARA NARAYANA MOORTHY".

The Teams interface also shows a "Request control" button, a "Leave" button, and a participant list at the bottom with icons for +72, HV, SANKARA NARAYANA..., HoD Mech (Guest), and arulkumar.



# Scholar of Eminence



Dr. B. Prabhu  
Assistant Professor,  
Mechanical Engineering,  
Kamaraj College of Engineering  
and Technology



Dr. M. Prithviraj,  
Assistant Professor,  
Mechanical Engineering,  
Kamaraj College of Engineering  
and Technology

# Student's Corner - Technical Article

## DESIGN AND FABRICATION OF WATER DISPENSER USING 3D PRINTING

### Team Members

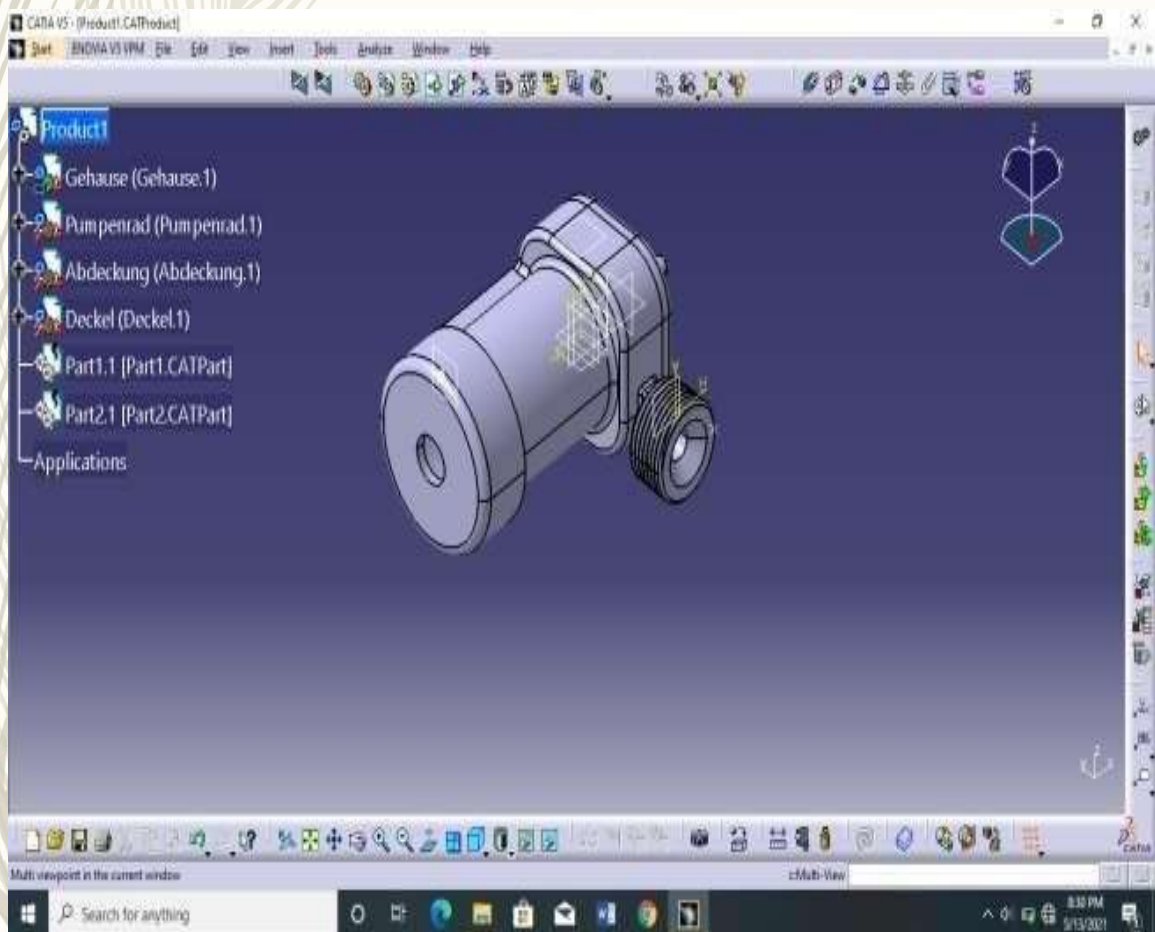
S. No.	Reg No.	Name of the student
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3	920418114036	MAHESWARAN.S

Project Supervisor – Mr.R.Sakthivel Murugan

### ABSTRACT

A lot of people nowadays depend on 20L cans of water for drinking purpose in the offices or even at homes because of their economical price tag. In Case you depend on such water cans for daily usage, you might as well own the accessories such as the plastic or metal dispenser comprising a water outlet at the lower end. Now -a- days wireless water dispenser pumps are available that are easy to install and use. They work with a soft touch function to dispenser and come in standard sizes. Their noiseless, super silent motor dispenses water with fast speed.

In recent years, 3D printing has developed significantly and can now perform crucial roles in many applications. Three-dimensional printing makes it as cheap to create single items as it is to produce thousands and thus undermines economies of scale. The creation of a 3D printed object is achieved using additive processes. In an additive process an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced cross-section of the object. This enables you to produce complex shapes using less material than traditional manufacturing methods. By this 3d printing technology we can able to Design & Fabricate a water dispenser in very less cost & with delivery rate than the existing model



# DESIGN AND FABRICATION OF IoT QUAD-COPTER

## Team Members

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Project Supervisor – Mr.B.K.Parrthipan

## ABSTRACT

Now a day's the technology of lot (Internet of things) plays a major role in industries by giving the most advancement in manufacturing and made enormous increase in productivity. The companies were also focusing on Industry 4.0 to be in the race for future technology. By this every Engineers all over the world also focusing on IoT.

In 1915, Nikola Tesla paved a way for UAV's and he completed that idea in 1916. But this technology faced a major problem which is control limit and efficiency. Many companies such as AMAZON, GOOGLE went in search of solution but they ended with nothing. Also NASA has planned to use UAV's as to transport for small goods, they also had the same problem which is mentioned above. Our GOVT. OF INDIA gave permission to supply vaccines for CORONA virus by DRONES. Where they also faced the problem 'control limit' & 'safety'.

So we took a small step to solve this major problem and thought that why shouldn't we use IoT as a key to open the door for the future tech in UAV's. Our aim is to make this UAV's to have control beyond its boundaries, to control the Quad copter with unlimited control range and we call it shortly as "IoT QUADCOPTER". This sophisticated technology consists of control unit, gyroscopic sensor and accelerometer sensor. With the help of ESP8266 we can provide uninterrupted internet for flight. Mainly our Quad-copter can be only controlled by the authorized user with safe and secured interface. This technology can be used in UAV's to achieve major change in transportations of goods, military purpose, search and rescue and also for medical purposes.



# DESIGN AND FABRICATION OF EXO-ARM FOR PARALYZED PATIENT

## Team Members

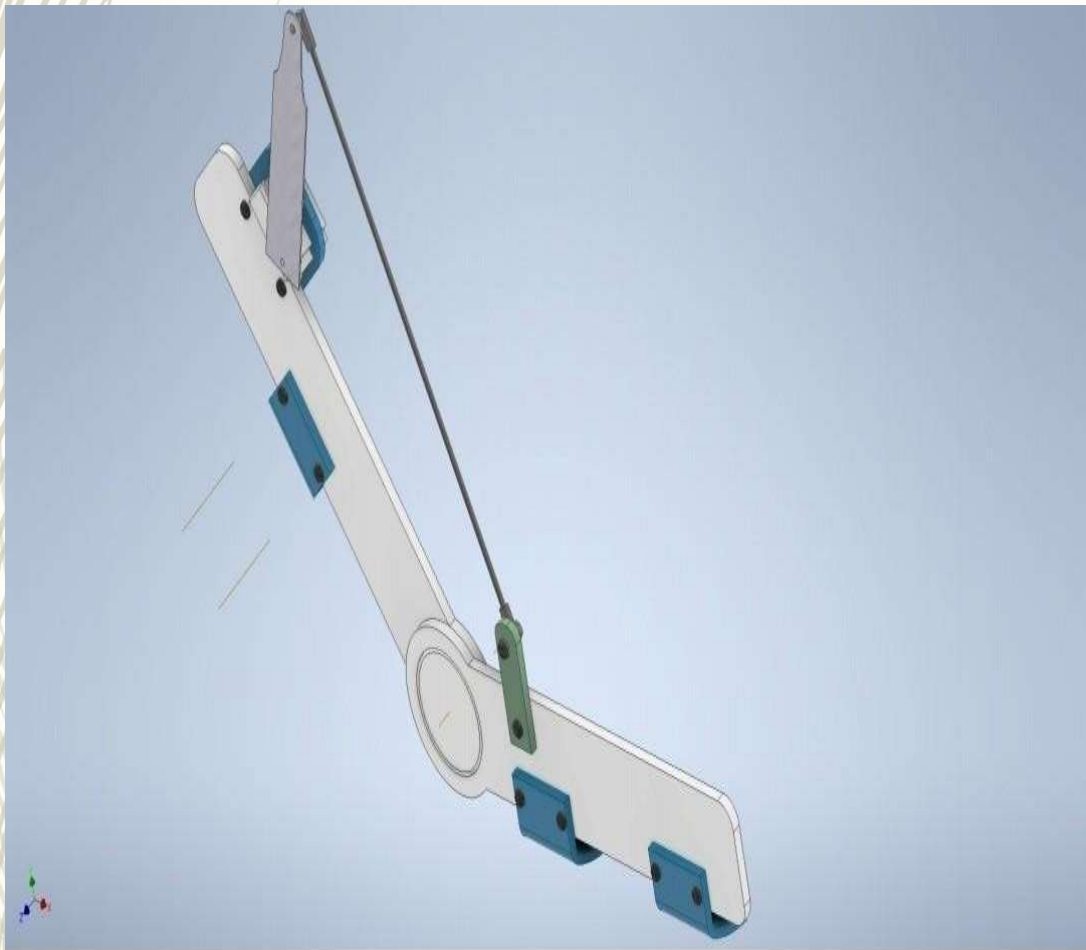
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Project Supervisor – Mr.B.Balavairavan

## ABSTRACT

Nowadays, Living in the world is a challenging one. But for paralyzed patient (Paralyzed patients are affected by paralysis. Paralysis is the loss of muscle function in part of your body. It happens when something goes wrong with the way messages pass between your brain and muscles. Paralysis can be complete or partial. It can occur on one or both sides of your body ) every minute in their whole life is a challenging. As a mechanical engineering student we came with some innovative idea to solve their problem.

As of now within the source we have we decided to design an equipment to facilitate the day to day activities of paralyzed and injured persons. In This concern, our team is planned to design and fabricate an economically and user friendly upper body exo-skeleton arms for rehabilitation and in the field of THERAPEUTIC.



# Alumni Corner

## Technical Article

### SKILLS TO SUCCEED

Begin with the end in mind. If you are determined to change your life once and for all you are most welcome to read further. Living in a world which constantly evolves in the aspects of success, happiness and wealth is really tough. Unlimited access to unauthentic information (successful life of people on social media) can literally take you to an emotional coma. I understand society has a very huge expectation on you, expecting miracles out of you and showing you the best possible way to live is to be Famous, Rich and successful.

In the next few paragraphs, I am going to share with you the most valuable skills that can transform your life. I am going to give you the key to your transcendence, remember the key is just like every other toll, you need to understand it, question it, master it and use it at the right circumstance to open the doors of Success.



# The Keys Skills you should possess to become Inevitably Successful

## I. Personal Skill to master

- **Learning How to Learn:**

This is the holygryl of skills. Once you realize that any type of skills can be learned and mastered, the world starts to look like a video game, you can level up and acquire new abilities. It takes just time, focus and effort to learn a new skill, it is the most underrated competency one could have but it has the largest benefits in the long run.

- **Learn to Meditate:**

You are not your body, you are not the thing you own, you are not what people think of you, you are your mind. Everything that makes you who you are, resides in the cage made of bones between your ears. Every action, idea, dream, desire, weakness, sorrow, pleasure begins here. 80% of successful people have a way of meditation in their daily life. If you learn to control your mind, you can become stronger and better than most other people.

- **Learn Discipline:**

No matter how small the set you make in a day, give it enough time and you will reach your destination. People are not consistent in what they do, they don't run the course, they don't play the long game, and often get distracted by shiny objects. They have constant temptation to jump on it and start over but even if you start making some progress over there, another shiny object passes by and you want to follow that. Hats what prevents people from making real progress. I believe everyone's life can be dramatically improved by discipline.

- **Learn to do Self Analysis:**

You can only improve what you can measure. Almost every successful person is tracking their progress, no matter what field or industry they are in. If you want to lose weight, start to track the food you eat and make a note of your daily activity, soon you realise the food you eat and level of activity you do have an impact on your weight. Once you start to make a note of your daily activity, you realise what is good for you and what not. Irrespective of your need or goal, start making a note of your progress.

- **The Ability to Self-Motivate:**

There will definitely be days where you won't feel like getting out of bed, there will be a lot of them. There will be days where you feel like you don't make any progress, these are the days which are going to make the difference between those who are going to make it and those who find excuses for their failures. How you make it happen, how you convince your body and mind to move in accordance with what you know is better, than whatever the alternative might be on the table. It resides in yourself and it's called willpower. The level of self-motivation someone can deploy is directly correlated with the following: his/her level of confidence, the positive outlook on the outcome, the quality of the goal and the environment they create for themselves.

- **Learn to Deconstruct your Goal:**

Most people look at the end result, they want to be rich, successful but they forget to break down their journey, and what does it take to get there. They need to break down their goal to small tasks and strategies them in a way that, number of tasks to be completed in a day, every week, every month so at the end of the year they can hit that goal.

## II. Interpersonal Skills or Social Skills to master

- **Learn not to Criticize, Condemn or Complain:**

Any fool can criticize, condemn or complain and most fools do it. It takes character and self-control to be forgiving, this discipline will pay major dividends in your relationship with people. When you criticize, condemn or complain you are clearly putting relationship points in the debit column. You more than likely know people who do this all too frequently are the kind of folks who light up the room only when they leave.

- **Emotional Intelligence and Empathy:**

You are entirely on a different level with everyone else. You see life more clearly; you make better decisions and your potential expands when everyone around you is limited.

- **Making People Feel Important:**

Smiling, knowing people's names, praising people, making an effort to know their interests and chat about them make people feel important. That is the underlying point of all of the above principles. If you make people feel important, how you walk through the world will be an exponentially more pleasant and incredible experience.

- **The Ability to verbalize what you think:**

You would be amazed how few people can put into words what they believe, what they feel, and what they think about an issue. This is one of the downfalls of relationships, when one unable to tell what is wrong or what they feel, instead they choose to bury the feeling of sorrow within themselves until to build up to the inevitable close of relationships. It's beyond romantic relationships, it's in friendship, with colleagues, within all human interactions.

- **The Ability to Negotiate:**

Everything you do is a negotiation. Negotiation is pursuing others to join your course to create a better outcome for you both. This deals with the ability to verbalise what we discussed earlier. Life is a constant negotiation with others, with yourself and even with time itself. Negotiation with time (Trading with the Future) is a negotiation with effort and satisfaction under the umbrella of time. By not doing the things that most people want now, you are negotiating a future where you can enjoy a life that is unavailable to most.

- **The Ability to Market and Sell:**

Everything you do is a sale, even if you want a girlfriend or boyfriend you need to sell them on the idea of you being the right person for them. If you need a job, then you should be able to sell your skill set over the other potential players. Even to yourself, you have to sell the idea that you can be, you can do better than you are doing today. Selling is not a synonym for lying, selling is a rational process in which you break down why your solutions will add value to other parties.

### III. Technical Skills to master

- **Spreadsheets:**

Spreadsheets are used in almost every sector to manage company data. While many people have basic spreadsheet skills, individuals who understand how to effectively use formulas and other features in spreadsheets like Microsoft Excel, Google Sheets can make it easier for you to organize and utilize data.

- **Microsoft Word skills:**

Most employers expect candidates to have a basic understanding of how to use Microsoft Word. However, you may be able to position yourself as a stronger candidate or qualify for more advanced roles by developing advanced skills, such as using macros or inserting charts.

- **Writing skills:**

Writing is a fundamental skill that people value in an individual. Regardless of the field you're in, the ability to write well is an asset. There are a variety of different types of writing skills you may want to consider learning, depending on your industry.

- **Public speaking:**

Whether you anticipate speaking in front of a large audience or just want to feel more confident in delivering presentations to one or two people, public speaking skills are invaluable. Public speaking skills take a lot of practice but can help you feel more self-assured and deliver presentations with greater levels of persuasiveness.

- **Math skills:**

Math skills can help you complete everyday tasks at college or work. Most employers prefer to hire candidates who have basic numeracy skills. However, depending on your aspiration, you may benefit from more advanced mathematical skills.

- **Resume skills:**

A strong resume with your experiences appropriately highlighted can have a powerful impact on your ability to get the job you want.



Mr. INDRAJIT.J

(2014 Passed out)

MD – GJ Surgical & Pharma

Chief Marketing Strategist,

Shiya Marketing,

Madurai.

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19UMEC033	THOMAS LIVIN DANİYAL.A	III-MECH
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