Kongunadu
College of Engineering & Technology
[Autonomous]

(Approved by AICTE,New Delhi & Affiliated to Anna University,Chennai)
(Accredited by NBA(CSE,ECE,EEE & MECH) and NAAC, An ISO 9001:2015 Certified Institution)
Namakkal- Trichy Main Road, Tholurpatti (P.O.), Thottiyam (TK), Trichy(Dt.)-621215

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AGRI ROOTS MAZAZINE

DEPARTMENT OF AGRICULTURAL ENGINEERING

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ABOUT THE DEPARTMENT

The Department of Agricultural Engineering was established in the year 2021, offers 4 years B.Tech-Agricultural Engineering course with an intake of 60 students. The department has well experienced and highly qualified faculty members, excellent infrastructure, ultra- modern buildings, well equipped laboratory facilities and career guidance. The department is established to develop professionals with the knowledge of modern farming, irrigation, farm mechanization, soil and water conservation, harvesting, renewable energy and crop production with IoT technology. The department is focusing on widening the practical knowledge of the students thus encouraging them to solve different practical difficulties in small-landholdings.The practical knowledge gained by them during practical field works and industrial visits has been added advantage for new technology and innovations. The department leads in the transfer of agriculture engineering and technology education to the younger generation on the right path tofulfill the career in agriculture and allied sectors.

DEPARTMENT VISION

- To Produce Excellent Professionals in Agricultural Engineering through quality education, leadership skills and ethical values to serve the societ.

DEPARTMENT MISSION:

- Providing in-depth knowledge and applications of agricultural machineries and associated process with embedded technology.
- Developing multidisciplinary learning environment with leadership skills.
- Impart training in entrepreneurial and life skills for enhancing employability.

PROGRAM EDUCATION OBJECTIVES (PEOS) :

PEO I: Graduates shall become agricultural professionals with specialization in irrigation, farm equipments, post harvest and renewable energy along with automation.

PEO II: Graduates shall able to design and develop optimistic products for the benefits of farmer and society.

PEO III: Graduates shall had professional ethics, team spirit, life-long learning, adopt corporate culture, core values and leadership skills and communication skills.

Program Specific Outcomes (PSOs):

PSO1: Professional skills: Students shall understand, analyze, design and develop agricultural equipments to meet the requirements of farmer and industry.

PSO2: Competency: Students shall qualify at the State, National and International level competitive examination for employment, higher studies and research.

Program Outcomes (POs)

Engineering Graduates will be able to:

Engineering knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Problem analysis:

Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Design/development of solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

Conduct investigations of complex problems:

Use research- based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

The engineer and society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environment and sustainability:

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

Project management and finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Life Long Learning:

Recognize the need for, and have the preparation and ability to engage in independent and life- long learning in the broadest context of technological change.

Quality Policy of the Institute

To strive continuously for producing the best result in terms of knowledge, Self-Discipline and application of the Knowledge acquired.

TECHINICAL ARTICLES

BIOTECHNOLOGY IN AGRICULTUE

Biotechnology in agriculture refers to the use of scientific tools and techniques, including genetic, molecular biology, and tissue culture, to enhance the productivity, sustainability, and quality of crops and livestock. It plays a vital role in addressing global challenges such as food security, climate change, and pest management.

Moreover, agricultural biotechnology supports environmental sustainability by reducing the reliance on synthetic chemicals, improving soil health, and minimizing post-harvest losses.

Overall, biotechnology in agriculture offers promising solutions to modern agricultural challenges, helping farmers produce more food with fewer resources while protecting the environment and promoting public health.

R.ROSHINI

R.KIRUTHIKAA

DRONES AND AERIAL IMAGING

Drones, or unmanned aerial vehicles (UAVs), have transformed aerial imaging by offering cost-effective, high-resolution data from above. Equipped with advanced cameras and sensors, they are used in agriculture, construction, real estate, environmental monitoring, and disaster response. Drones enable precise mapping, crop health analysis, site inspections, and real-time situational awareness. Their ability to access hard-to-reach areas and capture frequent imagery improves efficiency and decision-making. While challenges like regulatory restrictions, privacy concerns, and limited battery life persist, ongoing technological advancements continue to enhance their performance. Drones are becoming vital tools for modern imaging and data-driven insights across multiple industries.

VERTICAL FARMING AND HYDROPONICS

- Vertical farming and hydroponics are innovative agricultural practices aimed at maximizingfoodproducti onwhile minimizing land and resource use. Verticalfarminginvolves growing crops in stacked layers, often in controlled indoor environments such as warehouses or shipping containers. This method reduces the need for arable land and allows for year-round cultivation, making it ideal for urban areas.

Together, vertical farming and hydroponics offer sustainable alternatives to conventional agriculture. They support local food production, reduce transportation emissions, and can be integrated with renewable energy sources. However, they require significant initial investment and technical expertise, and energy use for lighting and climate control can be high. Despite these challenges, advancements in automation and renewable energy are making these systems more viable, offering a promising solution for food security in growing urban populations and climate-challenged regions.

S.MADHAVAN

PROJECTS

SMART SYSTEM FOR MONITORING THE SUSTAINABLE SPIRULINA GROWTH

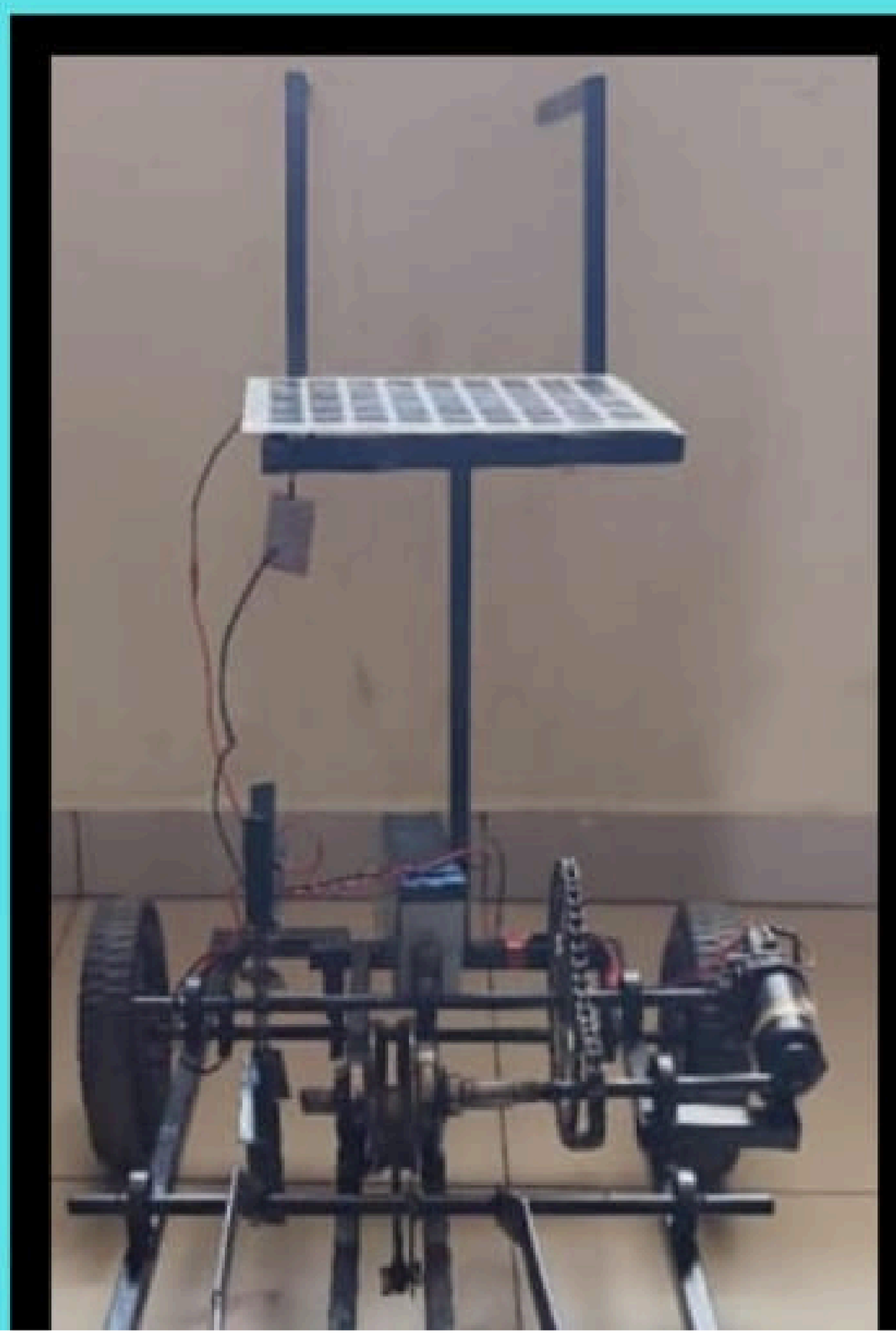
N.SANJAY
C.VINITHA
K.MOHANSHARMA

Algae cultivation plays a crucial role in various industries including biofuel production, pharmaceuticals, food supplements and wastewater treatment. However, maintaining optimal growth conditions for algae requires precise monitoring and control of environmental parameters such as temperature, pH, dissolved oxygen, light intensity and nutrient levels. This project presents an integrating IoT (Internet of Things) and sensors to optimize algae production while ensuring environmental sustainability. The system employs real-time sensors to monitor key growth parameters, transmitting data to a cloud-based platform for analysis. A machine learning model predicts algae growth patterns and suggests necessary adjustments to optimize biomass yield. Additionally, an automated feedback mechanism regulates aeration, nutrient supply and light exposure ensuring sustainable and efficient algae cultivation.

B.FRANGLIN
V.MAGESHVARAB
M.YOGESHWARAN

FABRICATION OF SOLAR POWERED PADDY TRANSPLANTER

This project focuses on developing and evaluating an innovative solar-powered mechanized paddy transplanter that aims to revolutionize rice cultivation while promoting sustainability. By utilizing renewable solar energy, the transplanter minimizes fuel dependency and reduces operational costs. Designed with precision and efficiency in mind, the system automates the transplanting process, ensuring that rice seedlings are planted at optimal depths and uniform spacing for improved crop growth and enhanced field uniformity. Additionally, the mechanized transplanter addresses critical labour shortages by reducing the need for manual transplanting, thereby easing the workload on farmers. Its user-friendly design, low maintenance requirements, and adaptability to various field conditions make it suitable for both smallholder farms and larger agricultural operations.

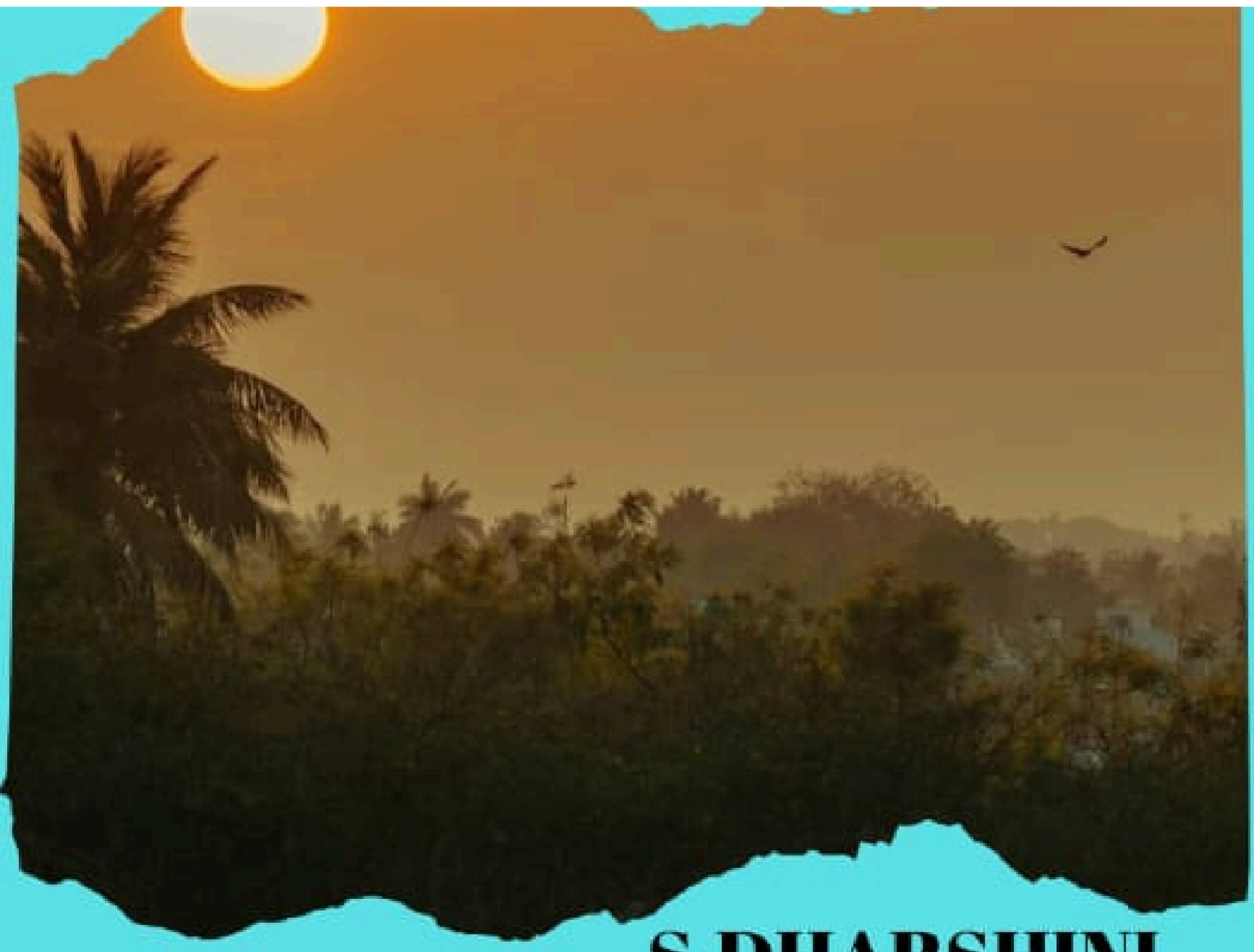


ACHIEVEMENTS

GATE ACHIEVEMENT

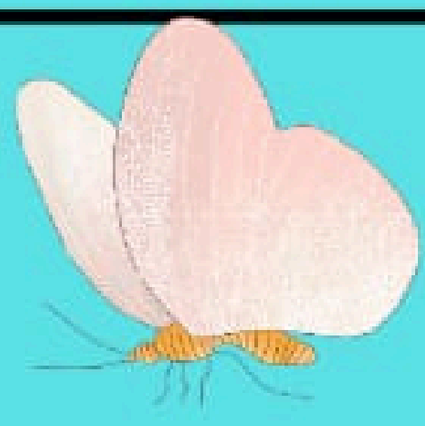
ISTE BEST STUDENT AWARD

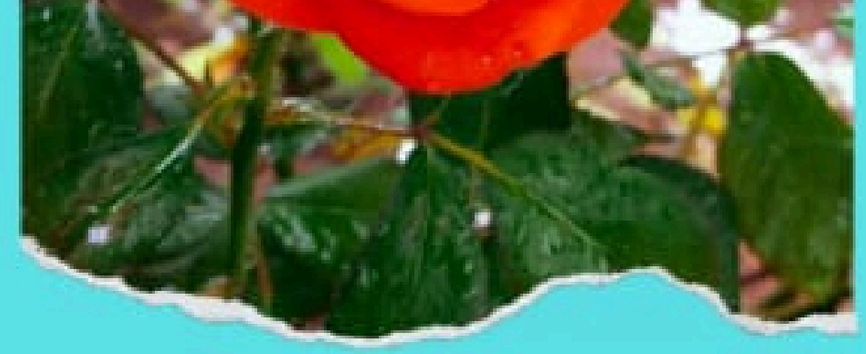
TAFE SOCIAL MEDIA ACHIEVEMENT



PHOTOGRAPHY

S.DHARSHINI





S.KAVIYA

S.REJIL

R.ROSHINI

R.SWETHA

CRAFT WORK

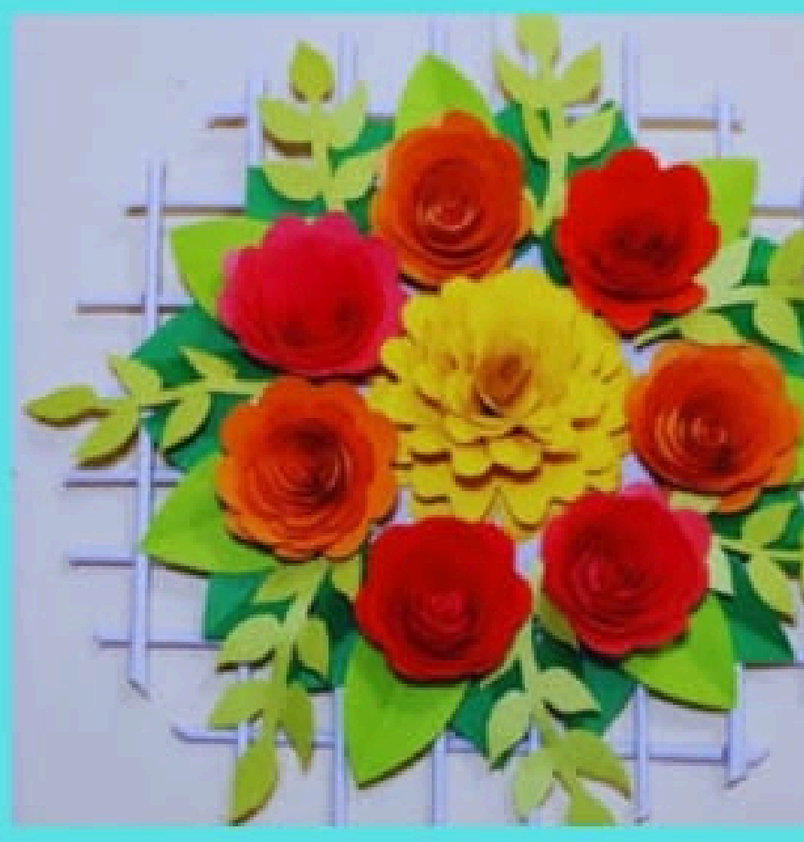
R.RITHIGA

S.SAVITHA

M.DERNISHA

M.GNANASHREE

S.KAVIYA



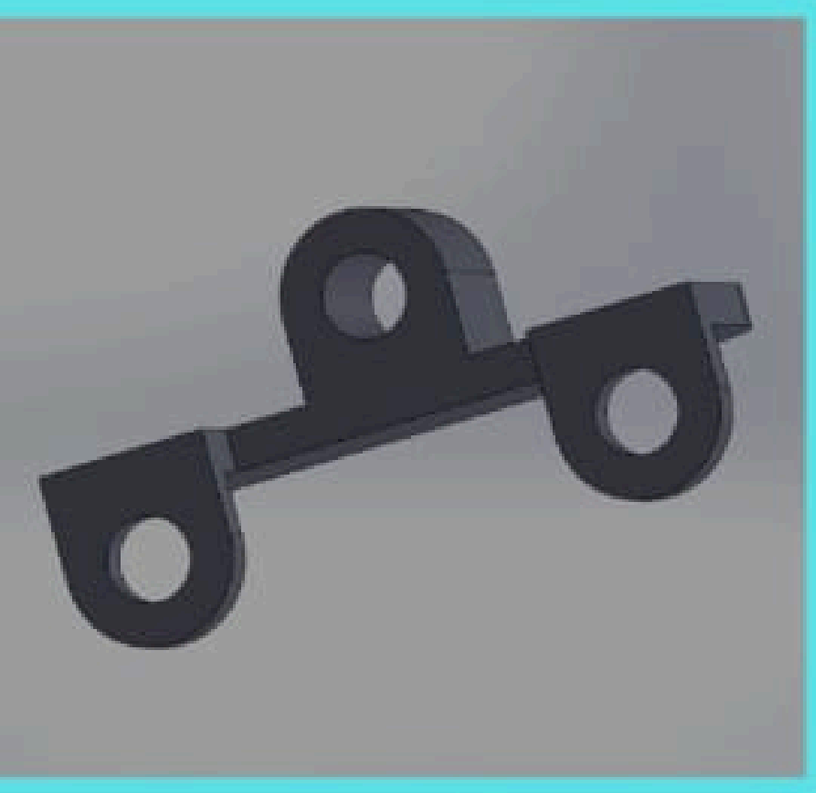
G.ISHWARYA

A.VANATHI

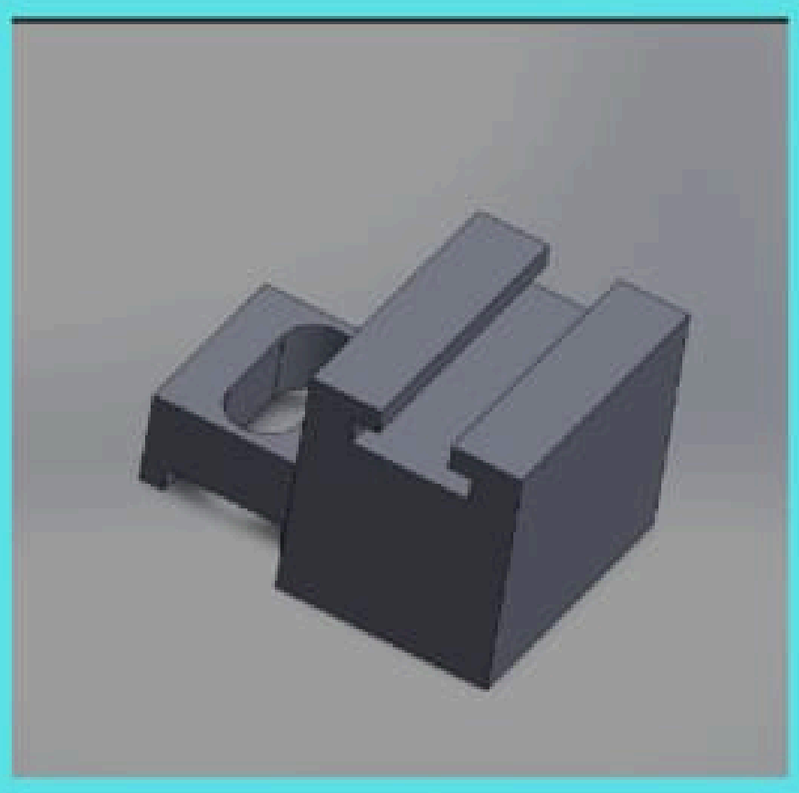
V.MATHIVATHANI

M.AKSHAYA

SOLID WORK DESIGN



S.SHARMILI



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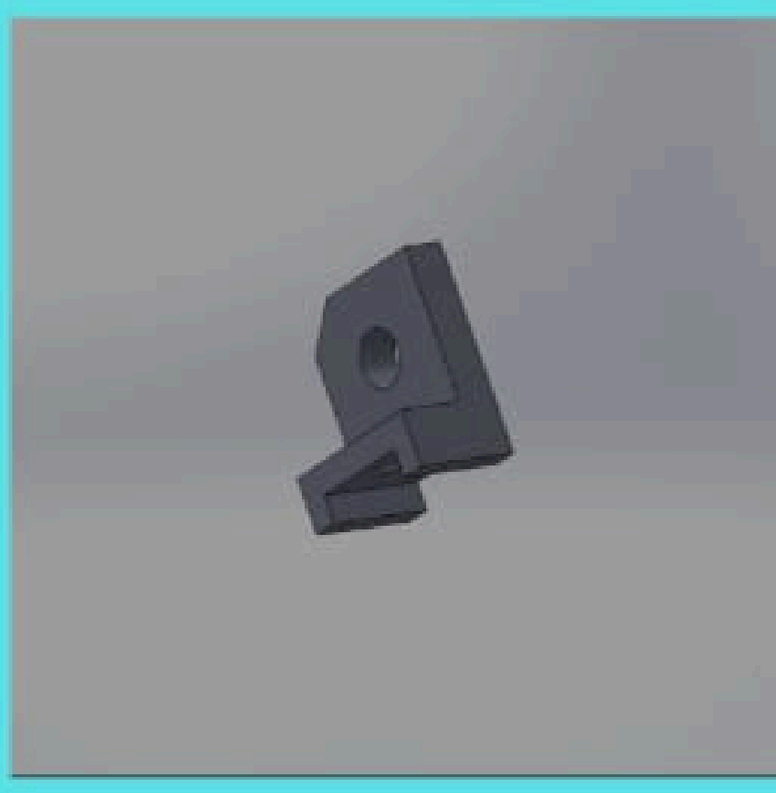
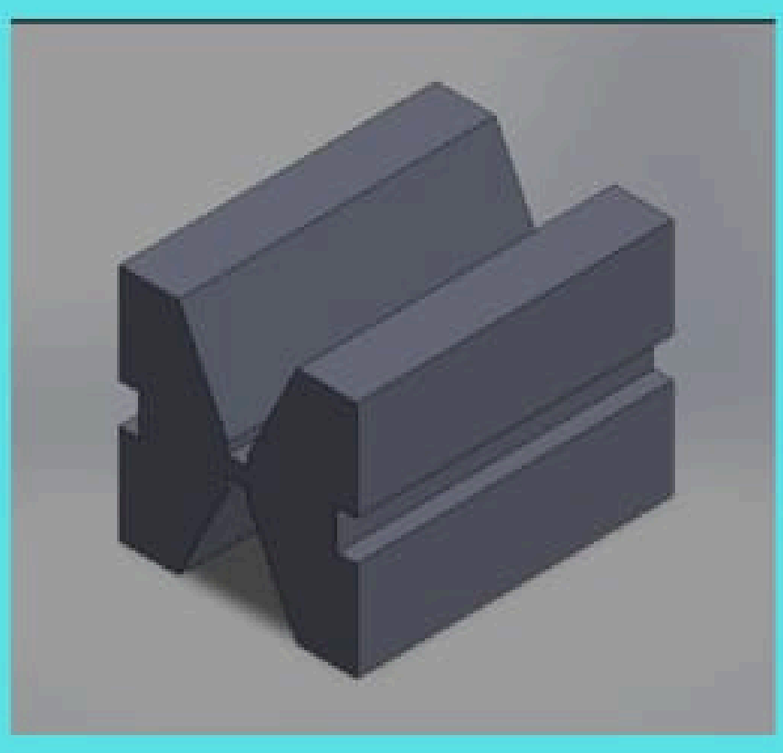
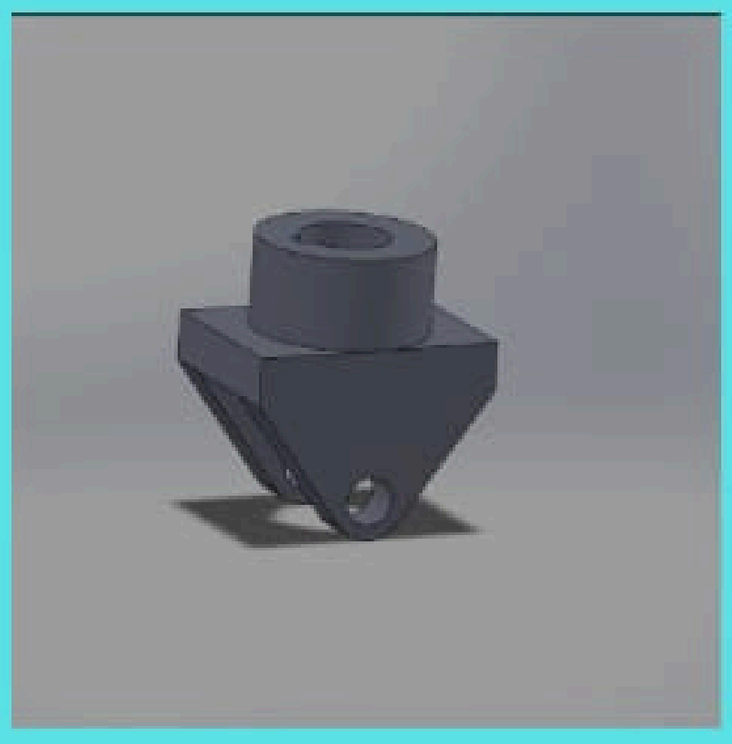


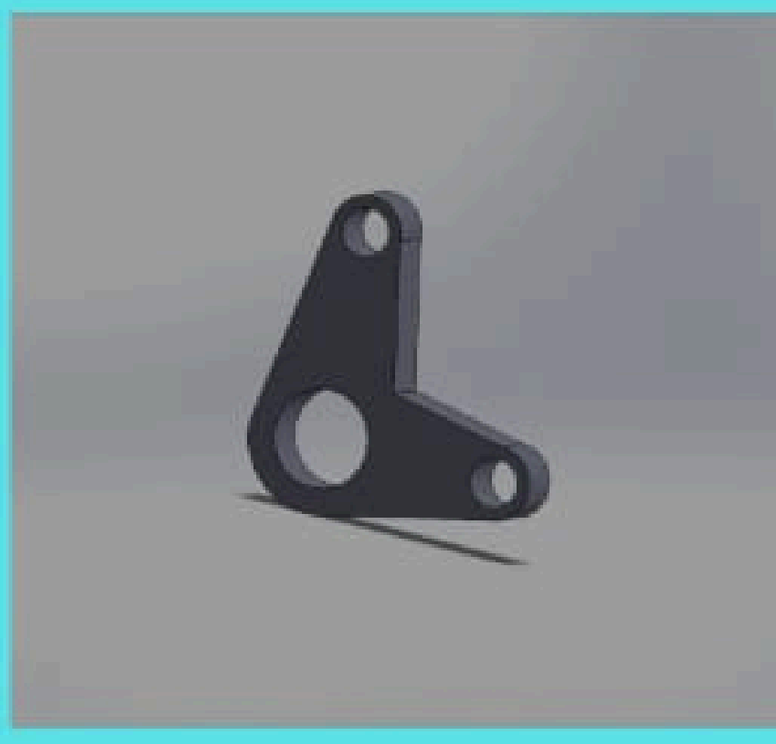
I.IMAYAVAN



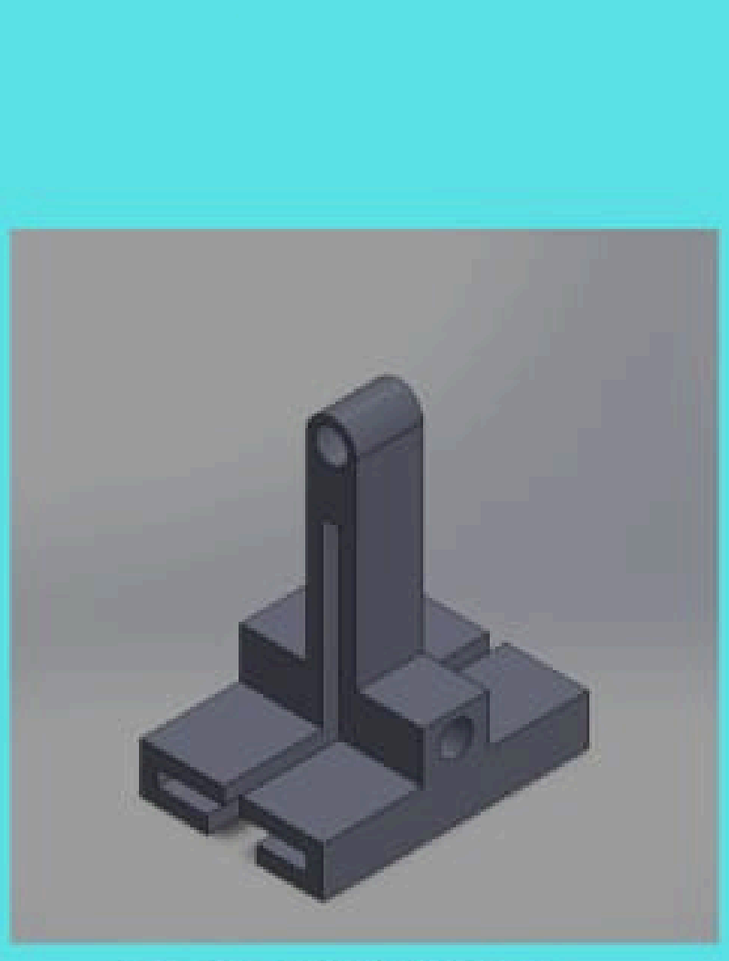
B.LATHIKA



R.ROSHINI

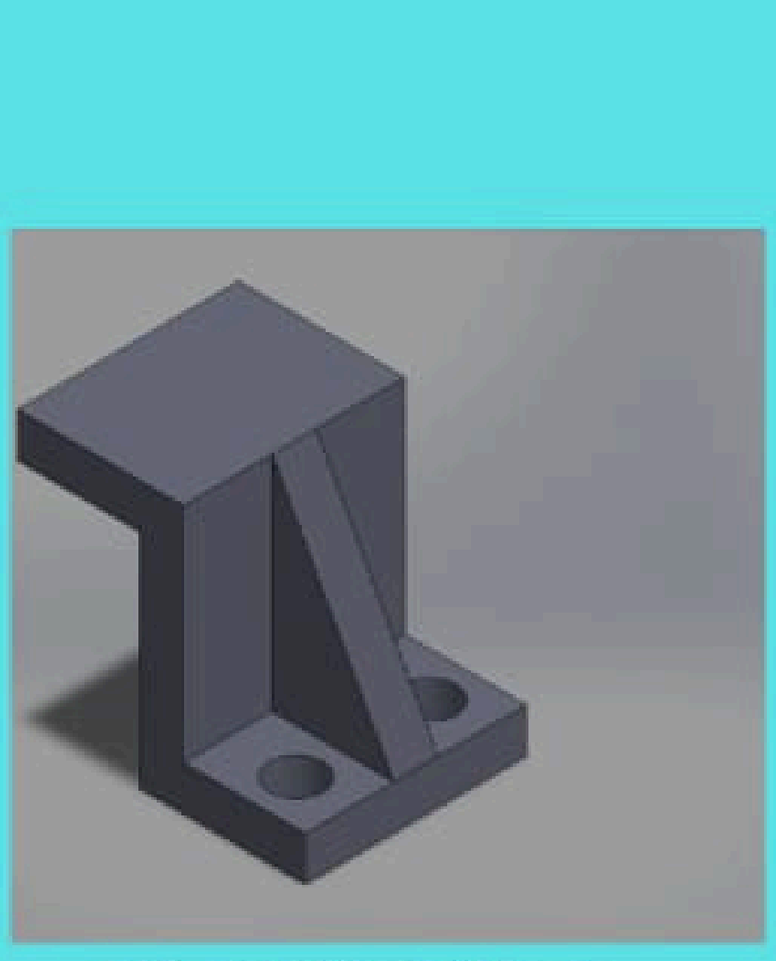


P.NAVEENA



G.MONICA

S.DHARSHINI



K.ANUSIYA

வேளாண்மை...

உயிர்கள் உறவாட உறுதி
தந்தாய் நீ உயிர்
கொடுத்து... இயந்திரமாய்
இயங்கும் இவ்வுலகிற்கு
இன்றுவரை இயக்கம்
தருகிறாய் நீ...
மருத்துவராகிறோம்,..
பொறியாளராகிறோம்,..
விஞ்ஞானியாகிறோம்...
ஆனால் உன்னை அறியும்
போதே மனிதராகிறோம்...
உன்னை ரசிக்க ரசிக்க
ரசிகனானேன்...
சீடனானேன்...

P.SANTHOSH KUMAR

A SMILE IS...

Hold fast to dreams
For if dreams die Life
is a broken-winged bird
That cannot fly.

Hold fast to dreams
For when dreams go
Life is a barren field
Frozen with snow...

S.REJIL

POEM

பஞ்ச பூதங்கள்

காற்றுக்கு என்ன
வேலை தண்ணீர் ஏன்
தேவை பூமியின்
சேவை நெருப்பினால்
தூய்மை ஆகாயம்
கூறும் வாய்மை இவை
யோசிக்கும் கூர்மை
இன்னும் மனிதனுக்கு
ஏன் வரவில்லை?
என்று கவலை.

S.MADHAVAN

DREAM

A smile is a gesture so small, And
it cost nothing at all.
You may feel it isn't worthwhile,
But oh, the things you can do
with a smile
A smile is a happiness beam,
Letting happiness flow just like a
stream. It touches the hearts of
others in a way. That can help
brighten up their day.
A smile is worth more than any
gold, It will keep your heart from
turning cold. Keeping that warm
happiness flowing within. So be
sure to wear your warming
cheerful grin.

R.V. PRIYADHARSHINI

COLLEGE VISION & MISSION

VISION

"To become Internationally Renowned Institution in Technical Education, Research and Development by transforming the students into Competent Professionals with Leadership Skills and Ethical values"

MISSION

- Providing the Best Resources and Infrastructure.
- Creating Learner - Centric Environment and continuous learning.
- Promoting Effective Links with Intellectuals and Industries. Enriching.
- Employability and Entrepreneurial Skills.
- Adapting to Change for sustainable Development.

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