VidyaJyothi Institute of Technology

(An Autonomous Institution)

Accredited by NAAC and NBA, Approved By A.I.C.T.E., New Delhi, Permanently Affiliated to JNTU, Hyderabad)

(Aziz Nagar, C.B.Post, Hyderabad -500075)

Design Analysis and Fabrication of Suspension and Braking Systems for All Terrain Vehicles

Name of the Principal Investigator: .G.Sreeram Reddy

All-Terrain vehicle is moving on off paved or gravel surface which is used in deserts,hillareas to manure easily also helped agriculture in mountain areas.Those vehicle consist of single sitter powered by IC engine,to control and smooth moment of All-Terrain vehiclebraking system and suspension systems are working, to work such a off road condition designof braking and suspension are important our project deals with design of braking system fourindependently working hydraulic breaks witch is pressurized by single master cylinder,suspension system are designed independently mono suspension on each wheel toabsorbs the shock's in different road conditions and generate less bumps,analysis of eachsystem carried by different software for braking ansys to assign the varies inputs like vehicleload,applied pressure on master cylinder,pedal force, coefficient of friction etc...for suspension lotus simulation to assigned inputs like CG value,wheel base,suspension length and damping value etc. analyse the outputs, to fabrication is done according to the designboth system components are assigned in specific position to work effectively

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

Principal Investigator

(G.Sreeram Reddy)

Vidya Jyothi Institute of Technology

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

Date: 10.08.2015

To
The Principal,
VJIT,
Hyderabad.

Sub: Request for Internal projects Grant - Reg.

Respected Madam,

I Mr. G. Sreeram Reddy would like to bring to your kind notice that, I have prepared the project model for "Design analysis and fabrication of suspension and braking systems for all terrain vehicles".

In this regard, I request you to provide financial support of Rs. 35000/- for executing the project.

Thanking you,

Yours Sincerely,

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

Mr. G. Sreeram Reddy
Dept. of Mechanical Engineering

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

Date: 03.02.2017

To
The Principal,
VJIT,
Hyderabad.

Sub: Request for Internal projects Grant - Reg.

Respected Madam,

This is a request Letter for acceptance and support to continue the project model for "Design and fabrication of portable CNC machine". This model has been prepared by me and to build, it will cost around Rs. 42850.

I therefore request you to sanction the mentioned amount of Rs. 42850, for executing the project.

Thanking you,

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

Yours Sincerely,

Mr. G. Sreeram Reddy
Dept. of Mechanical Engineering

VidyaJyothi Institute of Technology

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(Aziz Nagar, C.B.Post, Hyderabad -500075)

Design and Fabrication of Portable CNC Machine

Name of the Principal Investigator: Dr.G.Sreeram Reddy

CNC-Computer Numeric Control is the automation of machine tools which are operated by Numerical commands. It enables better manufactured product by reducing the number of steps involved and time taken in manufacturing.

This project titled "CNC Drilling and Milling Machine- Prototype" uses the Codes available in CNC Technology to control the machining variables on a self built 2 1/2 axis machine.2 ½ axis implies the controlled motion along 2 axes (X and Y) and motion of a tool spindle that moves in the Z (depth). The position of the tool is driven by direct-drive stepper motor in order to provide highly accurate movements. Machine is built on a dimensionally stable platform and the parts on which machining is performed are bolted using clamps and other hardware. Finally Using the Open source Arduino Interface and CNC shield this machine is brought into life.

This project aims to present a working model of the CNC machine which can be used for light Drilling, Milling operations and for explanatory purposes.

Principal Investigator

(.G.Sreeram Reddy)

PRINCIPAL
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Hyderabad-75.

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

11th May 2021

To

The Principal

Vidya Jyothi Institute of Technology

Subject: Request Letter for Financial Aid towards Internal Project

Respected Madam,

I Dr. K Vasanth, Professor & HoD Department of ECE, 'am happy to share that we have modeled a project which would help small scale vendors of tender coconut water to generate income with ease using the developed application. We have prepared the project model on ***"Automated tender coconut water extraction Machine"***. The cost of the machine is around Rs.1,60,000/-.

We would like to request you in this regard to support our project with the sanction of the incurred expenditure for which we shall be obliged.

With Due Respect

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

,Dr K Vassanth
Professor & HoD
Department of ECE

COCO KASAYA

Name of the Principal Investigator: Dr.K.Vasanth

Coconut is the "tree of heaven", provides many necessities of life including food and shelter. It is mainly cultivated for its nuts; it yields oil, oil cake and fibre. Water from tender coconut is a common refreshing drink and has been used as an excellent isotonic in several tropical countries. The process involved extracting oil, cake and fiber requires physical presence. Each of the items requires individual equipment and enormous physical strength to accomplish the task. Hence to ease the farmers of extracting the various products of coconut automatic equipment is very much desired.The design of this equipment is based on the principle of a screw-jack.

The main components of the machine are screw rod, pulley-cum-main nut, movable cross-rail, end columns, cutter blade, punch, base, electric motor and power transmission system as shown in figure 1. The screw rod has an overall length of 499 mm with a screw length of 331 mm. It is having a pitch of 3 mm. The screw rod carries the cross rail at its upper end. Screw rod together with the cross rail was raised and lowered with respect to the base by rotating the pulley-cum-main nut. A V-grooved pulley of 300 mm diameter with a hub of 60 mm outer diameter was selected. Its hub was internally threaded at its centre to act as the main nut for the screw rod. The hub, projecting to one side was machined to a step of 40 mm diameter and 20 mm length. This matched with the inner race of a taper roller bearing. This permitted the rotation of the pulley-cum-main nut in the bearing. Its rotation allowed the movement of the screw rod up and down depending upon the direction of rotation of the pulley. Movable cross rail consisted of two pieces of mild steel (MS) angles, two MS sleeves and another small sleeve at centre.

The end columns are placed at 454 mm distance from each other. The lower end of the columns rests on the channel section base. Cutter blade was made of stainless steel and fitted to a cross pipe. The blade was of curved shape, and is 300 mm in length and 50 mm wide. Cutting edge was serrated with the adjacent crowns at a distance of 40 mm apart. The blade was bolted between two pairs of flat pieces of 150×45×5 mm size, which were welded to the cross pipe. Punch was made of stainless steel having a length of 115 mm, outer diameter of 16 mm and inner diameter of 10.5 mm. The punch was bolted between two clamps to which two flat pieces were welded on opposite sides. This was then welded to the cross pipe, exactly opposite to the cutter blade. MS channel section having a length of 865 mm was provided with a hole of 31.75 mm diameter at a distance of 231 mm from one end to allow the screw rod to move below the base. The other end of the channel section acted as a base for the motor. Two pulleys and V-belt were used for power transmission system. A pulley of 63 mm diameter was fitted to the motor shaft and was connected to the 300 mm pulley-cum-main nut by the V-belt. The belt and pulley system transmitted the power from the motor to the screw rod, giving a speed reduction of4.8:1.Power was transferred using a V-belt and pulley mechanism.. As a result, the rotation of the main pulley led to the vertical upward or downward movement of the screw rod according to the direction of the motor. For punching, tender coconut was placed over the movable cross rail in its natural rest position.

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

Principal Investigator
(Dr.K.Vasanth)

Vidya Jyothi Institute of Technology

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

14-11-2018

To

Principal

Vidya Jyothi Institute of Technology

SUBJECT: Requesting a Financial Support in implementation of Internal Project, Reg.,

Respected Madam,

I Dr. D. Aruna Kumari would like to bring to your kind notice that, we have prepared the project model on "Enimo-Energy Conservation System". A very helpful application that can assist in energy conservation more efficiently. The development and implementation of the model costs us Rs. 55,000.

In this regard, I on request you to please provide the required financial support of Rs. 55,000/- so we will be able to execute the project.

With Due Regards

Yours Sincerely

Aruna Kumari

Dr D. Aruna Kumari, Professor
Department of CSE

Y. Praveen Kumar

Mr. Y. Praveen Kumar, Associate Professor
Department of CSE

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Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post,
Hyderabad-75.

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(Aziz Nagar, C.B.Post, Hyderabad -500075)

Enimo-Energy Conservation System

Name of the Principal Investigator: Dr.D.Aruna Kumari

Mr.Y.Praveen Kumar

In today's industrial production era, the usage of electricity is on the hike. All industrial machines use either electricity or solar energy. It is crucial for industrial appliances to work without any delays and interruption. To work without any delay, there should be scheduled maintenance from time-to-time and monitor the machine for any voltage hikes. The large-scale industries can afford a good & expensive management system for the industrial machinery, but the small and medium scale industries cannot afford such an expensive system. Even, if they do possess an energy management system, the installed system is not up to the mark. To overcome this problem, we are proposing this project , that helps in monitoring the performance of industrial machines, which can adapt to different environmental conditions, collect the data from the machines and process it. It not only monitors the appliances but also caters predictive information of appliance fault that can occur in the machine based on the data received. The most important thing is it is very inexpensive compared to other management systems in the market. The name of the proposed solution is "ENIMO" (Energy Information & Monitoring). Enimo can be easily installed with the industrial appliances and be able to customize the dashboard to your liking.

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

Principal Investigator

(Dr.D.Aruna Kumari)

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
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Aziz Nagar gate, C.B. Post, Hyderabad-500075

19.11.2019

To
Principal
Vidya Jyothi Institute of Technology

SUBJECT: Requesting a Financial Support in implementation of Internal Project, Reg.,

Respected Madam,

I Dr. D. Aruna Kumari and my team would like to bring to your kind notice that, we have prepared the project model on "IOT Based Food Grains Storage". A very helpful application that can assist the farmers to store their reap, more efficiently. The development and implementation of the model costs us Rs. 90,000.

In this regard, I on behalf of my team request you to provide the financial support of Rs. 90000/- so we will be able to execute the project.

With Due Regards

Yours Sincerely

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75

Dr D. Aruna Kumari, Professor
Department of CSE

VidyaJyothi Institute of Technology

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(Aziz Nagar, C.B.Post, Hyderabad -500075)

Enimo-Energy Conservation System

Name of the Principal Investigator: Dr.D.Aruna Kumari

Mr.Y.Praveen Kumar

In today's industrial production era, the usage of electricity is on the hike. All industrial machines use either electricity or solar energy. It is crucial for industrial appliances to work without any delays and interruption. To work without any delay, there should be scheduled maintenance from time-to-time and monitor the machine for any voltage hikes. The large-scale industries can afford a good & expensive management system for the industrial machinery, but the small and medium scale industries cannot afford such an expensive system. Even, if they do possess an energy management system, the installed system is not up to the mark. To overcome this problem, we are proposing this project , that helps in monitoring the performance of industrial machines, which can adapt to different environmental conditions, collect the data from the machines and process it. It not only monitors the appliances but also caters predictive information of appliance fault that can occur in the machine based on the data received. The most important thing is it is very inexpensive compared to other management systems in the market. The name of the proposed solution is "ENIMO" (Energy Information & Monitoring). Enimo can be easily installed with the industrial appliances and be able to customize the dashboard to your liking.

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

Principal Investigator

(Dr.D.Aruna Kumari)

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

07/08/2018

To

The Principal

Vidya Jyothi Institute of Technology

Hyderabad.

Subject: Requesting for support to implement an Internal Project of CSE Dept. Reg.,

Dear Madam,

I would like to bring to your kind notice that, we have developed a project model for **"Identifying Pet Moods by Artificial Intelligence"**. The cost incurring to complete the Project can be summed to Rs. 82,000.

In this regard, we request for provision of the required financial support of Rs. 82,000 which shall permit us to complete the project model.

Best Regards

Dr. B. Vijayakumar, Professor & HoD, CSE Dept.

Ms. Divya, Assistant Professor, CSE Dept.

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(Aziz Nagar, C.B.Post, Hyderabad -500075)

Monstograin : Monitoring the Stored Grains in Warehouses

Name of the Principal Investigator: Dr D.Aruna Kumari

Mr.Y.Praveen Kumar

India is a Global agricultural powerhouse. It is the world's largest producer of milk, pulses, and spices, and as well as the largest area under wheat, rice and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, etc. In India farmers mainly depend on warehouses to store the harvest.

So to improve the quality of grain storage we came up with this idea and focus on storage of grains after the yield is produced Storage of food grains plays a important role to preserve grains for future use and warehouses play a major role here, **Monstograin** helps monitor warehouses and prevent grain spoilage. This Project work on Monitoring the Storage of food grains in warehouses continuously using IoT device by considering the parameters of temperature, carbon dioxide and humidity to detect and prevent spoilage of food grains in advance including the study of behaviour using machine learning for accurate predictions.

Sensors in Monstograin would track the temperature, co2 and humidity conditions using IoT. Data is uploaded to Firebase real time Database, Real time DATA is sent to the web app / native aid app. From the past all data we will predict the future data and precautions to be taken using Machine Learning

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75

Principal Investigator

(Dr.D.Aruna Kumari)

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(Aziz Nagar, C.B.Post, Hyderabad -500075)

Identifying Pet Moods by Artificial Intelligence

Name of the Principal Investigator : Dr.B.Vijayakumar

Ms.S.Divya

Smart dog collar which detects the dog's mood by the sound produced by the dog. The mood is detected by the sound frequency and sound patterns of the dog produced. It does real time sound analysis and classifies the mood, which is later uploaded to the cloud and is notified to its owner.

This research can yield 60% to 65% accurate results if done by humans. We use a log-scaled Mel- spectrogram with 128 bands and collect 1024 samples at 44.1 khz with a window size 23ms. The audio file is represented as a 128 frames x 128 bands spectrogram image. Which is later passed through a convolutional Neural Network.

Pet me can help humans understood dogs in a much better way even if they are far away from them, which would help in fulfilling the emotional needs of a dog which they can't convey its emotions to us when we far from it.

Principal Investigator
(Dr.B.Vijayakumar)

(S.Divya)

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

19.11.2019

To
Principal
VJIT,
Hyderabad.

Subject: Request for Internal Projects Grant

Dear Madam

This is Dr. C. N. Ravi who would like to bring to your kind notice that, I have prepared a project model for "LoRa Based Renewable Energy Monitoring System with Open IOT Platform".

As I would like to implement the project for the college. The cost of the Project is around Rs.16500/-. In this regard, I request you to provide financial support of the same for executing the project for which shall be very appreciative.

Thanking you in advance.

Due Regards

Yours Sincerely

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

C. N. Ravi

Dr C. N. Ravi,
Professor, Dept. of EEE

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(Aziz Nagar, C.B.Post, Hyderabad -500075)

LORA BASED RENEWABLE ENERGY MONITORING SYSTEM WITHOPEN IOTPLATFORM

Name of the Principal Investigator:Dr.C.N. Ravi.

As a result of the response to the COP21, various renewable energy plants have beenglobally developed from conventional fossil fuel-based power generation plants.However, such renewable energy sources are difficult to operate in a planned schedule and have unstable output due to unpredictable environmental conditions such as the weather. It is possible to manage the power generation system more stably by collecting, analyzing and responding to the information of continuous power generation status, and the accumulated data provides an advantage of predicting future power generation and optimal maintenance.

This improved stability is also contributed to the grid reliability and flexibility. In this paper, we propose implementation methods to effectively construct energy monitoring system which is based on open IoT hardware and software platforms for economic system construction. And LoRa supporting low power long distance network is applied through low-cost solution.

PRINCIPAL
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Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

C.N. Ravi
Principal Investigator
(Dr.C.N. Ravi)

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

01/03/2021

To

Principal

Vidya Jyothi Institute of Technology

SUBJECT: Requisition for Internal projects Grant -reg.,

Dear Madam

This is Dr. C. N. Ravi who would like to bring to your kind notice that, I have prepared a project model for **"A Smart GSM Based Embedded Solution for Continuous Remote Monitoring of Cardiac Patients"**.

As I would like to implement the project for the college, I seek your support. The cost of the Project is around Rs.18900/-. In this regard, I request you to provide financial support of the same for executing the project for which shall be very appreciative.

Thanking you in advance.

Regards

PRINCIPAL
Vidya Jyothi Institute of Technology
Himayatnagar (Vill), C.B. Post.,
Hyderabad-75.

Dr C. N. Ravi, Professor
Dept. of EEE

VidyaJyothi Institute of Technology

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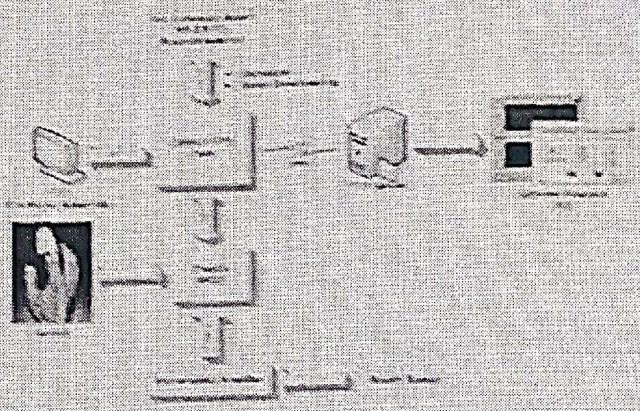
(Aziz Nagar, C.B.Post, Hyderabad -500075)

A Smart GSM Based Embedded Solution for Continuous Remote Monitoring of Cardiac Patients

Name of the Principal Investigator: Dr.C.N. Ravi



Continuous monitoring and analysis of vital parameters like SO2, heart frequency, breathing frequency is important for the prevention and management of cardiac heart failure. The cardiac sentinel allows continuous monitoring and recording of these parameters and automatic transmission of the collected data to the clinical server via an inbuilt GSM modem.

C.N. Ravi

Principal Investigator

(Dr.C.N.Ravi)

A. Padmaja

PRINCIPAL

Vidya Jyothi Institute of Technology

Himayatnagar (Vill), C.B. Post.,

Hyderabad-75.

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Aziz Nagar gate, C.B. Post, Hyderabad-500075

Date: 05.02.2018

To
The Principal,
Vidya Jyothi Institute of Technology
Hyderabad.

Sub: Request for Internal projects Grant – Reg.

Respected Madam,

This is Dr C. N, Ravi requesting you to support to build the project model I have developed on ***"Solar and Dynamo Based Power Generating Bicycle"***. This build this project model I request you for a financial grant under the Institutes Internal Projects scheme. The amount required for building the Project Model will be around Rs. 17400/- only.

I would be very grateful for the positive support from you.

Thanking you.

Yours Sincerely,

C. N. Ravi

Dr. C.N.Ravi
Professor, Dept. of EEE

PRINCIPAL
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(Aziz Nagar, C.B.Post, Hyderabad -500075)

Solar and Dynamo Based Power Generating Bicycle

Name of the Principal Investigator: Dr.C.N.Ravi

In present scenario a solar and dynamo power driven hybrid bicycle will help to solve the major problems of fuel prices, especially the petrol is rising steadily day by day. Again, the pollution due to vehicles in metro cities and urban areas is increasing continuously. To overcome these problems, an effort is being made to research some other alternative sources of energy to drive the Bicycle. Again, it is also not affordable to purchase vehicles (mopeds, scooters or motorcycles) for all the class of society. Keeping this in mind, a search for some way to cater these economically poor people as well as to provide a solution for the environmental pollution was in progress. The solar and dynamo assisted hybrid bicycle is driven by direct current motor fitted in the front axle housing and run-on electrical energy. The solar panels mounted on the carriage will charge the battery and which in turn drive the hub motor. When the bicycle is idle or stationary in parking, the solar panel will charge the battery and a pair of 48-volt dynamo is fixed on the rear wheel of the bicycle will charge the battery when the bicycle is running on the road. This arrangement will replace the petrol engine, the gear box and the fuel tank in case of a two-wheeler or a gear shifting arrangement of a bicycle.

C. N. Ravi

Principal Investigator

(Dr.C.N.Ravi)

PRINCIPAL
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