

<http://>

**BACHELOR OF ENGINEERING
(COMPUTER ENGINEERING)**
KING MONGKUT'S UNIVERSITY OF TECHNOLOGY THONBURI

PORT FOLIO



Wichitchai Suwanno

Triamudom suksa school of the south

Study Plan : Science - Math (Pre Engineering)

CONTENT

01 | Profile&Education

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CONTACT



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Wichitchai Suwanno



singh_lemonh



Singh_LemonH

PROGRAMMING SKILLS



OTHER SKILLS



PROFILE

Name : Mr.Wichitchai Suwanno **Nickname :** Singh

Age : 18 year old

date of birth : 26 November 2005

nationality : Thai **ethnicity :** Thai

Religion: Buddhism

Hobby : Write programs, read news about technology and new techniques, listen to music, play music, play city management games.

Address:

School : Triamudom suksa school of the south

Study Plan : Science - Math (Pre Engineering)

Toeic Score : 425 points



Scan!!

Education

2015 - 2018

Grade 1 - Grade 6

Srithammarat Suksa School

Program : EIP



2018 - 2021

Grade 7 - Grade 9

Yothinbamrung School

Program : BMTP



2021- 2024

Grade 10 - Grade 12

**Triamudom suksa
school of the south**

Program : Pre Engineering



GPAX : 3.57



Engineering and Science projects that you want to do in the future?

What I want to do in the future is **A wheelchair controlled using BCI** (Brain-Computer Interface) technology. Because the majority of the population in Thailand are elderly and I have made innovations for the elderly. Like Safety Walker and Emergency Equipment, so I wanted to create this project. **To enable the elderly to move as they wish**, even if they cannot move the wheels of their wheelchairs, so that in the future my parents or relatives may be able to use this. I was partially inspired by the news about the invention of a face-controlled game console, so I will apply it to this project.

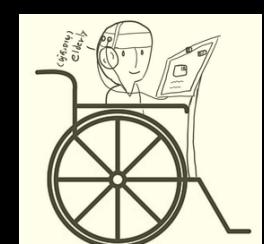
Go back in time. Since childhood, I have been interested in computers and various technologies. In middle and high school, **I found opportunities to participate in various IT competitions**. Therefore, I had the opportunity to participate in activities with many friends who were outstanding in various fields. which were very close, making the work more smooth It made me develop my creativity. Working as a team and because in every job I have been the main programmer, I have gained experience in programming with various module devices as well. Able to cope with the pressure of working increasingly well.

In my free time activities, I often study new information. To always apply or inspire my projects. If I become a programmer, I want to create new things. This aspect is for others to continue their studies. Just like I'm doing now.

I am very interested in joining the Computer Engineering Department of King Mongkut's University of Technology Thonburi. Because I am interested in the courses offered and the various environments of this university. So I found an opportunity to join the activities of this university. To find news channels and contact channels with various seniors

My goal after graduating from this faculty I want to be a highly skilled programmer. There is knowledge that I have gained to develop equipment. or complex systems and come back to develop them for Thailand or my own university And I also want to work with international companies such as Microsoft, Google or Apple, etc. **and will share knowledge in the media**.

Content to provide knowledge to people within the country



Project simulation

Achievements

Nation Level

main programmer



31 MAY 2023

SIC Thailand 2023

Received 16th place from the selection of representatives of Thailand.

National competition activities **Student Innovation Challenge Thailand 2023** Research Center for Facility Technology and Medical Devices (A-MED) has organized activities. Selection of inventions for people with disabilities and the elderly to select a team of students who have outstanding innovations to help people with disabilities or the elderly. as a representative of Thailand to participate in the invention contest for people with disabilities and International Seniors (The Global Student Innovation Challenge 2023) at the International Academic Conference

Safety Walker and Emergency Equipment

Four-legged walking aid for the elderly and the visually impaired. Because there is an ultra sonic sensor that detects and emits a sound more frequently when approaching an object. And when a fall occurs, there will be a gyro scope sensor that will capture the angle of the fall and then there will be an ESP32 CAM camera to take pictures of the elderly and send a notification to the caretaker's line via line notify. In order to help as quickly as possible and also send information to the firebase database to connect to another esp8266 board that controls the speaker to play the mp3 module to send another channel to call the administrator. Finally, in the event of a problem with the system, there is also a remote that can be hung around your neck to activate the alarm system in case of an emergency. Most of the equipment is made using a 3D printer.



More details



Codes of this project



Summary of study results : From studying four-legged walking aids, I have learned to design walking aids that are most suitable for walking for the elderly. You will also gain skills in programming Arduino with various sensor modules. Sending data to store in Firebase database. Writing code to send notifications to LINE. I also practiced 3D printing and gained skills in presenting work in English on stage.

Professor Siriporn Limpijampon, Ph.D.
 President
 National Science and Technology Development Agency



13 -16 JUL 2023

Team "The Power of Messimo"

BCG Innovator with Arduino IoT Explore

Participate in the competition final

Competition project International Arduino Competition Innovative design BCG Innovator with Arduino Explore IoT Kit under the 50,000+ project to develop students into future engineers "The Next Engineering Pathway". This project is a collaboration between the IoT department, Faculty of Engineering. King Mongkut's Institute of Technology Ladkrabang The organizing team has considered and selected teams that have submitted Proposal presentations through selection and received the right to participate in the finals in an on-site format.

CO measurement and warning system for helmet to respiratory system analysis

Project : Respiratory analyzer for industrial workers that collects data on dust, smoke (CO gas), humidity, and temperature installed on helmets and safety vests to analyze health and trends in respiratory disease. In addition, notifications are sent on the device, namely LED light and sound from the buzzer, to the wearer along with notifications to LINE and display the results in the form of a Dashboard for operators to analyze and take care of the health of employees.



More details



Codes of this project

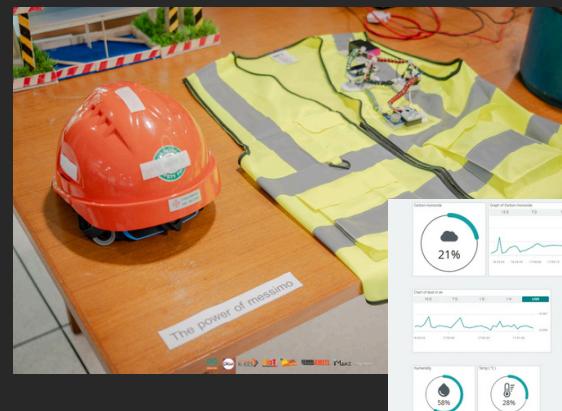


Figure 1 : Picture of work piece

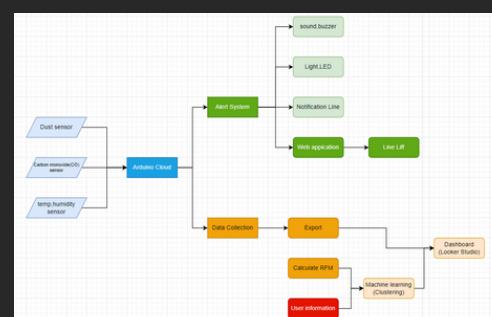


Figure 2 : working diagram



What I learned : I received training in using the Arduino MKR WiFi 1010 board and using the Arduino cloud to create my first IOT work. I also gained experience in being a team leader in managing the division of various tasks to members within the team and also leading. Present your work and answer questions on stage in English.



More details
of each subject

Additional subjects

SCIENCE - MATH (PRE ENGINEERING)

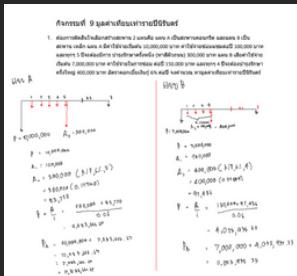
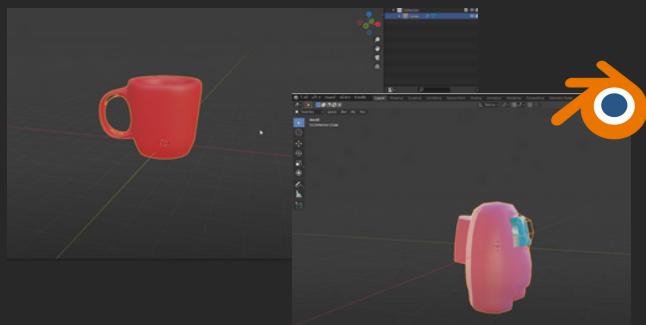
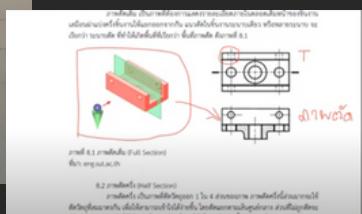
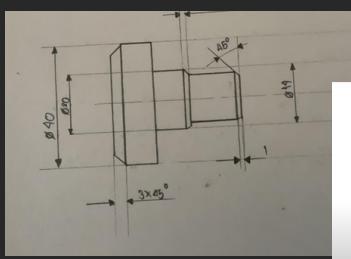
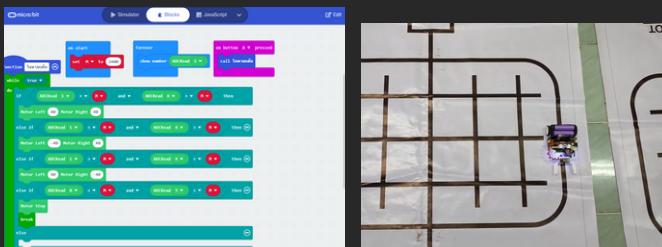


TABLE 10 Direct Cash Flow, Compound Interest Factors						
	Single Payment	Present Value	Present Value of Uniform Series Payments	Present Value Factor	Uniform Gradient Series Factor	Gradual Uniform Series Factor
1	1.0000	0.9924	1.0000	1.0000	0.9924	0.9924
2	0.9899	0.9802	0.9899	0.9899	0.9802	0.9802
3	0.9711	0.9558	0.9711	0.9711	0.9558	0.9558
4	0.9473	0.9210	0.9473	0.9473	0.9210	0.9210
5	0.9174	0.8731	0.9174	0.9174	0.8731	0.8731
6	0.8797	0.8186	0.8797	0.8797	0.8186	0.8186
7	0.8340	0.7600	0.8340	0.8340	0.7600	0.7600
8	0.7805	0.6989	0.7805	0.7805	0.6989	0.6989
9	0.7203	0.6335	0.7203	0.7203	0.6335	0.6335
10	0.6533	0.5637	0.6533	0.6533	0.5637	0.5637
11	0.5802	0.4900	0.5802	0.5802	0.4900	0.4900
12	0.5000	0.4160	0.5000	0.5000	0.4160	0.4160
13	0.4160	0.3350	0.4160	0.4160	0.3350	0.3350
14	0.3300	0.2500	0.3300	0.3300	0.2500	0.2500
15	0.2400	0.1600	0.2400	0.2400	0.1600	0.1600
16	0.1460	0.0700	0.1460	0.1460	0.0700	0.0700
17	0.0590	0.0100	0.0590	0.0590	0.0100	0.0100
18	0.0370	-0.0200	0.0370	0.0370	-0.0200	-0.0200
19	0.0170	-0.0600	0.0170	0.0170	-0.0600	-0.0600
20	0.0060	-0.1000	0.0060	0.0060	-0.1000	-0.1000
21	0.0010	-0.1300	0.0010	0.0010	-0.1300	-0.1300
22	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
23	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
24	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
25	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
26	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
27	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
28	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
29	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
30	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
31	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
32	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
33	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400
34	0.0000	-0.1400	0.0000	0.0000	-0.1400	-0.1400



I have studied in this study plan which has added engineering subjects as follows.

3D MODELING

Is a course to learn about creating 3D models with Blender.

It allowed me to practice 3D design and practice creativity. and using various tools in Blender

INTERNET OF THINGS (IOT)

is a subject to learn about programming Controlling various digital devices

It is the subject that I am most skilled at. I learned basic C programming and working with Arduino. It was a subject that I used to continue in various competitions.

ENGINEERING ECONOMICS

It is a subject that studies the calculation of costs, interest, equivalent value, and the value of the resources used.

I learned the computation of equivalent value. It is very useful in deciding which project to invest in to be the most worthwhile.

BASIC ROBOTICS

It is a subject that studies programming to control robots. to do various missions

I learned how to assemble robots. Block programming of microbit, which made me learn basic commands and solving problems according to various missions received.

ENGINEERING DRAWING

It is a subject to study about engineering drawing. in various designs

I learned drafting skills. The use of various writing tools and accurate drawings that can actually be used.

Activity

ME



COM CAMP 33

received academic training of Faculty of Computer Engineering King Mongkut's University of Technology Thonburi

Learned to write c language, various commands, data visualization with python language and various libraries, then learned to do the basics of making a website. There are activities that enhance skills in computer engineering and practice making final projects with friends as well.

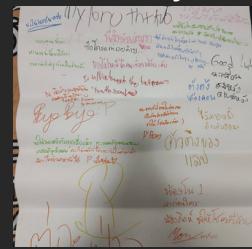
i-Dia Camp

Trained Web Design of the Faculty of Multimedia King Mongkut's University of Technology Thonburi

Learned design thinking, ideas, Ux design, and UI design together with the program. figma with principles and learned information from this faculty.



final project



Paper of memories

Engineering KMUTT

Open House 2023

Visited and studied about various branches of Faculty of Engineering King Mongkut's University of Technology Thonburi



Engineering Quest 2024

Participated in engineering problem-solving activities Faculty of Engineering King Mongkut's University of Technology Thonburi

Has developed himself in the field of academics. It was a competition that created a push for me to think about learning more skills in various academic subjects, including physics, chemistry, and mathematics, to continue studying at the university level.



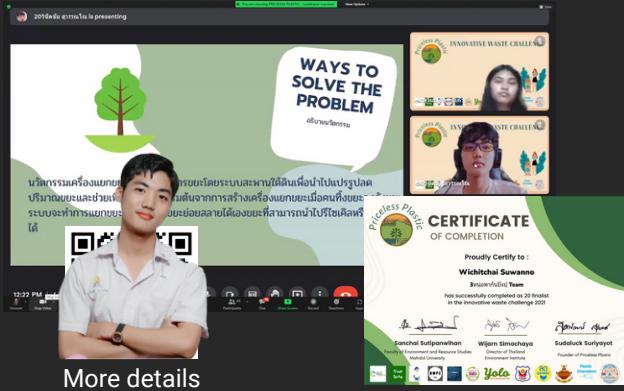
EIS Metaverse Business Idea Competition

Qualified for the final 8 teams

Competition to think of innovative ideas related to the Metaverse and the current situation. Then came a business presentation where our group presented the work "VR THERAPY" which will be an application that simulates a treatment center that will help treat a group of people. Being bullied mentally and people who are addicted to the Internet make business design concepts



20-27 APR 2022



More details

26 DEC 2022



More details

3 FEB 2023



17 NOV 2022

Innovative waste challenge 2021

Qualified for the final 20 teams

It presents an innovative idea about the environment. In which we have introduced the concept of "3 in 1 trash can".

IS Project: Intelligent Water Bottle Disposal Dispensary "CBTP"

Serves as the Main Programer, designing the pieces and going up to demonstrate in the school auditorium.

Gain programming skills with the Kidbright board and design and create items connected to various modules.

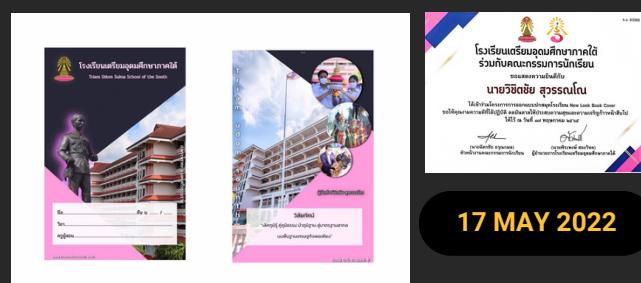
Web Application Creation Competition at the 30th High School Academic Fair

received a gold medal

Gained skills in making Web Apps with limited time under the problem of collecting freight transport data.

Book cover design competition at the New Look Book Cover event

Participated in the book cover design competition practiced design Composition and practice using Photoshop to design a book cover with limited proportions.



17 MAY 2022



code



Web page

Mini project to make Snake Mania game using Html/Css/Js.

Snake game is controlled using the arrow keys or the joystick buttons shown on the screen. Have the goal of collecting points indefinitely and the snake will be as long as the points it has

Practiced the logic of the snake game, including music on web pages. Random targeting within the area, collecting points and making buttons to play on the phone.

A mini-project uses AI to analyze X-ray images and find the trend of lung disease.

It is a website that will compare X-ray images of the lungs using AI to find the trend of lung disease.

Learned how to pull Api, train Ai with Teachable Machine, and display data in graph form.

Mini project to make XO game using Html/Css/Js

**It is an XO game that must be played by 2 or more people.
It was created as a web game due to its own expertise.**

Learned the logic of making an XO game and making a reset button. To reset the screen

Mini project to make web app note using Html/Css/Js

It's a website for writing notes or things. can add notes by pressing the plus button and delete notes by pressing Double-click the note you want to delete.

Learned how to create elements with JavaScript and how to use Event commands in JavaScript language.

Mini-project makes characters pose in-game using Godot.

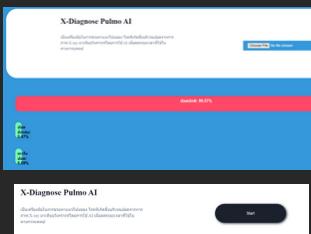
It makes the character perform various movement animations on the scene.

Learning the basics of making games requires skills in the tools of the Godot game engine.

Help teachers prepare IOT teaching materials for science and technology learning groups.

Create an automatic watering machine using the Kid bright board.

Learned more skills in using the Kidbright board and gained experience in using the soil moisture sensor to measure soil moisture for the first time.



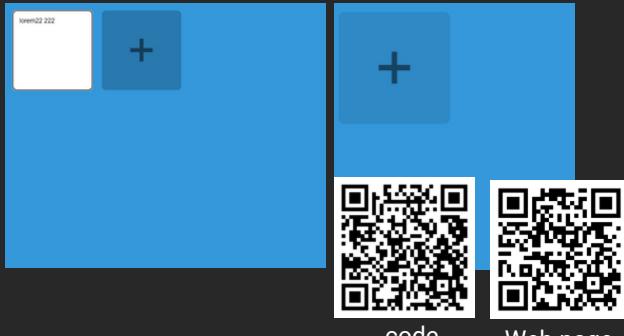
code

Web page



code

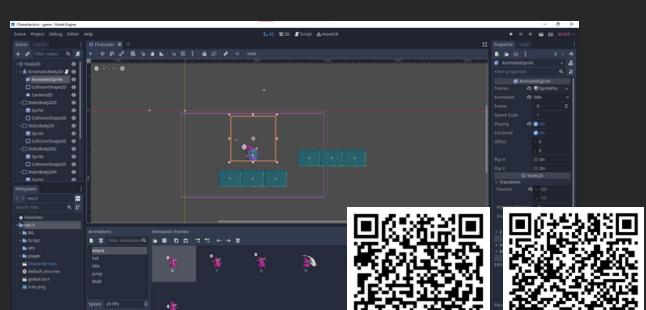
Web page



code



Web page



code



More details



31 AUG 2022



24 DEC 2021



13 JUN 2023



13-14 JAN 2023

Nam jai pun suk Project

Responsible for creating the page and making forms to receive donations to give to Pak Phanang Hospital.



Picture from the hospital
facebook page

Phra kiao ceremony

Was chosen to be the person holding the golden flower tray.



Wid anu rak camp

Participated in mangrove planting activities and making Burn candle pattern fabric



Bye Neer activities, the final ceremony for M.6 students

Serve as the school flag bearer on the day of the ceremony and act as a puppeteer Receive seniors from the auditorium



17 FEB 2023

Make a YouTube channel with content about casting various games.

There are more than 106 videos in total, 97 followers and a maximum of 1300 views.

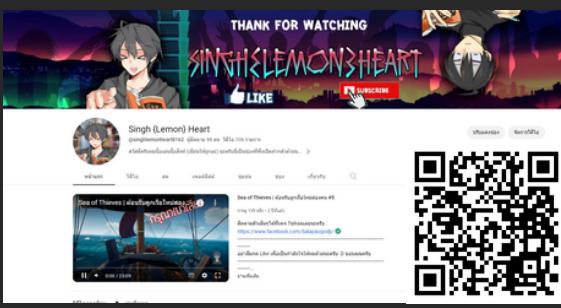
Get video editing skills using Sony vegas, design clip covers to attract viewers and practice ideas for creating different content within the video.

Sport Day

Served as the welfare party of the red pakorn party. Give various help to the cheerleaders.



23 JUL 2023



Youtube Channel

Certificate



International Programming Competition Using Java Language



Problem solving programming competition using c,c++ languages



Data science training, web design and google sheet usage



Participate in the Olympic Robotics Competition



Serve as a video editor in a video clip contest. About the SCI project



Training on guidelines for continuing education in the Faculty of Computer Engineering



Basic website building training with Html/Css/Js.



Basic python programming language training



Basic C programming training



JavaScript writing training About Array and Object Constructor



JavaScript writing training About DOM Element and DOM Form Event



Basic website building training with Html/Css/Js.

Wichitchai Suwanno



T
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"Any man whose errors can take that long to correct is quite a man."

-Robert Oppenheimer