

# **2021** KMITL E-Internship Program

Undergraduate – Graduate

King Mongkuts Institute of Technology  
Ladkrabang (KMITL), Thailand

# Programs overview

According to COVID-19 pandemic that is putting a halt to our international travels, the exchange students program cannot be continued this moment. We are exploring ideas and initiatives to engage our partners and I would like take this opportunity to explore with you on the possibility of an “E-Internship” program.

KMITL can arrange e-internship for your students for instance working on research or online projects with KMITL's advisor where interns could complete these projects at the comfort of their own home. The interns could complete these projects online.

## Goal

To fulfill and continue collaboration activities between KMITL and partner universities.

## Program plan

KMITL provide E-internship for international students for at least 4 weeks. It's no limited nomination period.

The application we will match the supervisor considered by the study topic. (The student can request others the topic from the topic from page 4-13)

The internship platform will be on online meeting and regular reports will be arranged by the supervisor.

After the internship completed, we will issue the certificate for all students.

# Application

To complete the application process, please kindly send the application form (pdf files) and all the required application documents to [pranita.ka@kmitl.ac.th](mailto:pranita.ka@kmitl.ac.th) before the deadline.

The nomination should submit at least 2 months before the internship period.

Required documents:

1. Nomination Letter
2. Application Form (required photo attach). Please follow this link >> <https://oia.kmitl.ac.th/?q=user/register>

Once you have created an account you can find the application form under the following menu: Exchange Programs > Application Form > Application Forms

Please complete the application and describe the study topic in detail and clearly.

3. Official Academic Transcripts
4. Copy of Passport
5. CV

More detailed information about application can be found on our website: <https://oia.kmitl.ac.th/>

<b>Project Title</b>	AI/HPC Platform Management
<b>Description</b>	Students will collaborate and assist existing research teams in the development of an AI/HPC toolchains & platform. We are working with solution providers to develop & implementing a platform to manage a wide range of datasets and experimental models to be used in applied AI research.
<b>Supervisor</b>	Dr. Akkarit Sangpetch (Computer Engineering) Email: akkarit.sa@kmitl.ac.th
<b>Expected student</b>	Undergraduate: 3 <sup>rd</sup> – 4 <sup>th</sup> year Graduate  English proficiency Familiarity with Devlops tools including kubernetes, helm, ansible Prior experience in system development using c/c++, python, go or rust
<b>Communication Channel</b>	Email, Skype, Slack

<b>Project Title</b>	GPS Trajectory Data Mining
<b>Description</b>	There is a big dataset of GPS data of Thailand Taxis that send locations and timestamps every minute along this 2 years. In this topic, the internship student has to detect the cluster of taxis which have the the temporal similarity behavior in terms of location, time, and speed.
<b>Supervisor</b>	Asst.Prof.Dr. Rathachai Chawuthai (Computer Engineering) Email: rathachai.ch@kmitl.ac.th
<b>Expected student</b>	Undergraduate: 4 <sup>th</sup> year Graduate  English proficiency Familiarity with Machine Learning, Data Mining
<b>Communication Channel</b>	Email, Google meet

<b>Project Title</b>	Data Analytics/Deep Learning, System Performance, System/Distributed System
<b>Description</b>	Data Analytics on Consumer Insight or Video/Image Processing for Inventory or Used Bottle Classification.
<b>Supervisor</b>	Asst.Prof.Dr. Orathai Sangpetch (Computer Engineering) Email: orathai.sa@kmitl.ac.th
<b>Expected student</b>	Undergraduate: 3 <sup>rd</sup> – 4 <sup>th</sup> year Graduate  The students should have programming skills at least, and be able to communicate in English well.
<b>Communication Channel</b>	Email, Google meet, Microsoft Teams, Skype, Zoom

<b>Project Title</b>	IoT application project
<b>Description</b>	<p>* Students propose their idea of the project of the IoT application system with assumption that this proposal is for getting funding. The project must be a big impact in society, or industries. * Students should consider the following detail of the project's idea:</p> <ul style="list-style-type: none"> <li>- What are pain points and customer insight?</li> <li>- Designing the system of the proposed project on both hardware/software, including specifying IoT based hardware modules and software used, as well as giving reasons why they choose those hardware and software for their project.</li> <li>- Implementing the simple prototype of the project (need to be discuss for the possibility)</li> </ul>
<b>Supervisor</b>	<p>Asst.Prof.Dr. Panarat Cherntanomwong (Computer Innovation Engineering)  Email: panarat.ch@kmitl.ac.th</p>
<b>Expected student</b>	<p>Undergraduate: 3<sup>rd</sup> – 4<sup>th</sup> year</p> <p>The students should have background knowledge, and be able to communicate in English well.</p>
<b>Communication Channel</b>	Email, Google meet, Microsoft Teams

<b>Project Title</b>	Computer Vision and AI
<b>Description</b>	3D image inspection for Universal Robot guidance system
<b>Supervisor</b>	Assoc. Prof. Dr. Surapan Airphaiboon (Electronics Engineering) Email: surapan.ai@kmitl.ac.th
<b>Expected student</b>	Undergraduate: 3 <sup>rd</sup> - 4 <sup>th</sup> year Graduate  Basic electronics for and Computer programming
<b>Communication Channel</b>	Email, Microsoft Teams, Zoom meetings



<b>Project Title</b>	Near Infrared (NIR) Spectroscopy for Agricultural Product and Food
<b>Description</b>	<ul style="list-style-type: none"> <li>- Introduction of near infrared (NIR) spectroscopy.</li> <li>- Determination of NIR spectra of specific agricultural product and food.</li> <li>- NIR spectroscopy modelling.</li> <li>- NIR spectroscopy of specific agricultural product and food manuscript for journal publication.</li> </ul>
<b>Supervisor</b>	Prof. Dr. Panmanas Sirisomboon (Agricultural Engineering) Email: panmanas.si@kmitl.ac.th
<b>Expected student</b>	Undergraduate: 4 <sup>th</sup> year Graduate  English proficiency and knowledge background of mathematics, physics and chemistry
<b>Communication Channel</b>	Email, Microsoft Teams

<b>Project Title</b>	Educational Technology, Innovation in Education, e-learning, virtual reality
<b>Description</b>	The purpose of Internship in Department of Industrial education is to exchange knowledge and new ideas on Educational Technology, Innovation in Education as well as cultural between your country and Thailand. You will do and publish the research paper with the assigned professors.
<b>Supervisor</b>	Asst.Prof.Dr. Sirirat Petsangsri (Faculty of Industrial Education) Email: sirirat.pe@kmitl.ac.th
<b>Expected student</b>	Graduate  The students should have background knowledge in Educational Technology , computer in education, and English proficiency .
<b>Communication Channel</b>	Email, Google meet, Microsoft Teams, Zoom

<b>Project Title</b>	Sound analysis of the musical instrument.
<b>Description</b>	Different kind of musical instruments produces the different feature of their sound. In this topic, we will investigate the feature of musical instrument you are interested by using sound analysis techniques.
<b>Supervisor</b>	Dr. Nachanant Chitanont (Institute of Music Science & Engineering) Email: <a href="mailto:nachanant.ch@kmitl.ac.th">nachanant.ch@kmitl.ac.th</a>
<b>Expected student</b>	Undergraduate: 4 <sup>th</sup> year Graduate  The students should have TOEFL more than 500, background knowledge in digital signal processing.
<b>Communication Channel</b>	Email, Google meet

<b>Project Title</b>	Business Reseach (Human Resource Management/ Organization Development / Industrial Management/ Supply Chain Management)
<b>Description</b>	Business Research
<b>Supervisor</b>	Asst. Prof. Dr. Nuttawut Rojniruttikul (Business School) Email: nuttawut.ro@kmitl.ac.th
<b>Expected student</b>	Undergraduate: 4 <sup>th</sup> year Graduate  English Proficiency - Hight/Moderate
<b>Communication Channel</b>	Email, Microsoft Teams, Zoom meetings, Google meet

<b>Project Title</b>	Small-Scale Vertical Axis Wind Turbine (VAWT)
<b>Description</b>	<p>The objectives of this topic are to:</p> <ol style="list-style-type: none"> <li>(1) Conduct literature review on the design of a VAWT in regard to the aerodynamic performance.</li> <li>(2) Perform an analytical study to estimate the torque expected to be generated from a VAWT.</li> <li>(3) Determine the effects of scaling the VAWT's dimensions on its aerodynamic performance (in particularly, lift, drag, and torque).</li> </ol>
<b>Supervisor</b>	<p>Dr. Pititat Itsariyapinyo  (International Academy of Aviation Industry)  Email: pititat.it@kmitl.ac.th</p>
<b>Expected student</b>	<p>Undergraduate: 4<sup>th</sup> year  Master</p> <p>Fluent in English, Knowledge of fluid dynamics and/or aerodynamics.</p>
<b>Communication Channel</b>	Email, Microsoft Teams, Zoom meetings, etc.