

CLP Internship Programme 2022

Project Focus – Electronic Engineering (12-month)

<b>Project Code</b>	E2_SAND_01	
<b>Project Detail</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	Jun 2022 to May 2023
	<b>Preferred Discipline</b>	<b>First Preference:</b> Electronic Engineering <b>Other Preference:</b> Electrical Engineering
	<b>Project Name</b>	Intelligent signal analysis algorithm development for 400kV Gas Insulated Switchgear Partial Discharge
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>To further improve reliability of 400kV Gas Insulated Switchgear in Power Station via intelligent Partial Discharge pattern recognition &amp; analysis and therefore enhancing the power supply stability from Power Station, where are the cluster of electric</li> </ul>
	<b>Project Description</b>	<ul style="list-style-type: none"> <li>To develop an intelligent signal analysis algorithm for 400kV Gas Insulated Switchgear (GIS) Partial Discharge so that we can identify various types of defects and prevent asset failure</li> <li>The system can facilitate our asset management strategy for Power Station's 400kV GIS which is important asset for Hong Kong power supply system.</li> </ul>
<b>Required Skills</b>	<ul style="list-style-type: none"> <li>Computer programing skills</li> </ul>	

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## Project Focus – Electronic Engineering (12-month)

<b>Project Code</b>	E2_SAND_02	
<b>Project Detail</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	Jun 2022 to May 2023
	<b>Preferred Discipline</b>	<b>First Preference:</b> Electronic Engineering <b>Other Preference:</b> Electrical Engineering
	<b>Project Name</b>	Evaluation of smart telecontrol / telemetry equipment for substations
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>To study the market trend and explore new technologies for smart transmission and distribution substations enablement.</li> <li>To support the evaluation of smart remote terminal units (RTUs) and intelligent electronic devices (IEDs) for smart transmission and distribution substation applications.</li> </ul>
	<b>Project Description</b>	<ul style="list-style-type: none"> <li>Power grid is undergoing digital transformation to improve supply reliability, operation efficiency and asset management. Remote Terminal Units (RTUs), Intelligent Electronic Devices (IEDs) / sensors and information / operational technology (IT/OT) security are key enablers in our smart grid journey.</li> <li>Our intern will be given a year to familiarise with CLP's supply network and the related telemetry systems supporting the power business functions.</li> <li>He/she will be able to know more about the common communication protocols in Supervisory Control and Data Acquisition (SCADA) systems and work with our engineers to go through the development cycle of telecontrol / telemetry equipment.</li> <li>As a part of the leaning, exposures in different new smart grid initiatives, trial projects and cybersecurity of IT/OT systems will be expected.</li> <li>Ad-hoc assignments may be given considering the operational needs.</li> </ul>
<b>Required Skills</b>	<ul style="list-style-type: none"> <li>Basic knowledge of Master Control Units (e.g. Internet-of-Things), Programmable Logic Controllers (e.g. Industrial Automaton) or Remote Terminal Units (e.g. SCADA).</li> </ul>	

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Project Focus – Electronic Engineering (12-month)

<b>Project Code</b>	E2_SAND_03	
<b>Project Detail</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	Jun 2022 to May 2023
	<b>Preferred Discipline</b>	<b>First Preference:</b> Computer Science/ Computer Engineering <b>Other Preference:</b> Electronic Engineering
	<b>Project Name</b>	Automating Security Systems for Daily Operations
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• Develop software applications/monitoring &amp; control tools for Security Branch (systems and operations' team) to streamline/automate the process in daily operation.</li> <li>• To aid these objectives, he/she will be required to understand the operating mechanisms of security systems &amp; operations and use this knowledge to ensure successful development of applications/tools.</li> </ul>
	<b>Project Description</b>	<ul style="list-style-type: none"> <li>• Through the on-job training, candidate will learn about the knowledge of security systems and security operations.</li> <li>• Coordination and collaboration with other parties may be required which shall help candidate to enhance his/her interpersonal skills.</li> <li>• He/she will have the opportunity to gain the experience on developing software applications/tools for Security Branch to automate/streamline the current process/workflow.</li> </ul>
<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Strong software programming and coding skills in Python, MS Power Automate, Power BI, Visual Basic, and etc.</li> </ul>	

## CLP Internship Programme 2022

## Project Focus – Electronic Engineering (12-month)

<b>Project Code</b>	E2_SAND_04	
<b>Project Detail</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	Jun 2022 to Jul 2023
	<b>Preferred Discipline</b>	<b>First Preference:</b> Electronic Engineering <b>Other Preference:</b> Computer Science
	<b>Project Name</b>	Visualization dashboard for management of telecom systems and processes
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>Streamline and optimize the existing processes of telecom systems and cybersecurity routine through enhancing the visualization dashboard and system automation</li> </ul>
	<b>Project Description</b>	<ul style="list-style-type: none"> <li>Using Microsoft Power BI, Power Automate and Microsoft Forms to develop dashboards and manage process to visualize the performance of Telecom management systems and cybersecurity routine process</li> <li>Facilitating the development of key performance indicators for monitoring corporate telecom expense usage for trend analysis and cost optimisation</li> <li>Supporting the process development for managing telecom operational changes and maintenance process workflow with visual presentation for performance analysis</li> </ul>
<b>Required Skills</b>	<ul style="list-style-type: none"> <li>Microsoft Office Apps (e.g. Forms, Power Automate, Power BI, Power Apps, etc)</li> <li>Hands-on development experience and knowledge in any of following skills.</li> <li>Linux platform</li> <li>Programming language (e.g. Python, Perl, R, JavaScript, Java, etc)</li> </ul>	