CLP Internship Programme 2022

Project Focus – Technology Research (12-month)

Project Code	TR_SAND_01	
Project Detail	**Internship Category**	Sandwich
	Internship Period	Jun 2022 to May 2023
	Preferred Discipline	**First Preference:** Communications and Journalism **Other Preference:** Science, Engineering, Sustainability, Environment
	Project Name	Science Communication during the Energy Transition
	Business Objective(s)	• The mission of the CLP Research Institute (CLPRI) is to strengthen the organisations's knowledge on emerging trends and capabilities with the intent of increasing the economic, social, and environmental value of our energy products, services, and businesses in the communities we serve • Science communication is an important endeavour to summarise, clarify and share to specific audiences the knowledge of emerging trends and key insights that are developing during the energy transition
	Project Description	• The primary responsibility of this role is to: • Support internal and external science communications to stakeholders • Support CLPRI colleagues for communication-related tasks • Conduct research and communication reports on emerging technologies during the energy transition
	Required Skills	• Excellent communication and writing skills • Excellent analytic and critical thinking skills • Genuine interest in emerging technologies in the energy field • Good knowledge of science communication and research methods

CLP Internship Programme 2022

Project Focus – Technology Research (12-month)

Project Code	TR_SAND_02	
Project Detail	**Internship Category**	Sandwich
	Internship Period	Jun 2022 to May 2023
	Preferred Discipline	**First Preference:** Computer Science **Other Preference:** Statistics
	Project Name	Wind Turbine Predictive Maintenance ML/AI Model Development
	Business Objective(s)	• Develop deep learning model for wind turbine component failure prediction to provide early warnings to operation team. • Conduct extensive research and analysis on wind turbine SCADA system data and weather forecast data to explore the causal relationship on the power generation and wind resource.
	Project Description	• Perform data mining work under the supervision of project owner • Assist project owner on various ETL tasks, data pipeline automation, etc. • Support project owner on deep learning model development • Build visualization report / dashboard for illustrating forecast result and generated insights • Prepare PowerPoint slides / reports for project sharing sessions • Other ad hoc tasks / duties as assigned
	Required Skills	• Essential knowledge in ML/deep learning models • Essential knowledge in Python/R Programming • Knowledge in Azure Cloud Environment • Knowledge in Power BI dashboard or other UI design • Good presentation skills.

CLP Internship Programme 2022

Project Focus – Technology Research (12-month)

Project Code	TR_SAND_03	
Project Detail	**Internship Category**	Sandwich
	Internship Period	Jun 2022 to May 2023
	Preferred Discipline	**First Preference:** E1 (Electrical Engineering) **Other Preference:** EN (Energy Engineering)
	Project Name	Development of Blended Learning Training Programmes
	Business Objective(s)	• To apply stated-of-the-art technology and blended learning training approach in engineering related training programmes to enhance training effectiveness.
	Project Description	• To review engineering related training programmes and analysis training effectiveness by learning science theories • To develop a new training framework for engineering training progeammes to enhance training effectiveness by instructional design concept • To review and apply new technology in engineering training progeammes
	Required Skills	• Coding technique in C++, and/or Python • Experienced in Arduino and/or Raspberry Pi development • Experienced in design application, such as Premiere Pro, Photoshop, AutoCAD, 3DS MAX, Fusion 360.