

2025 NCHC Open Hackathon

NCHC X OpenACC X NVIDIA

Jay Chen
NVIDIA Solution Architect | NCHC Open Hackathon Organizer
jaych@nvidia.com

OpenACC
More Science, Less Programming

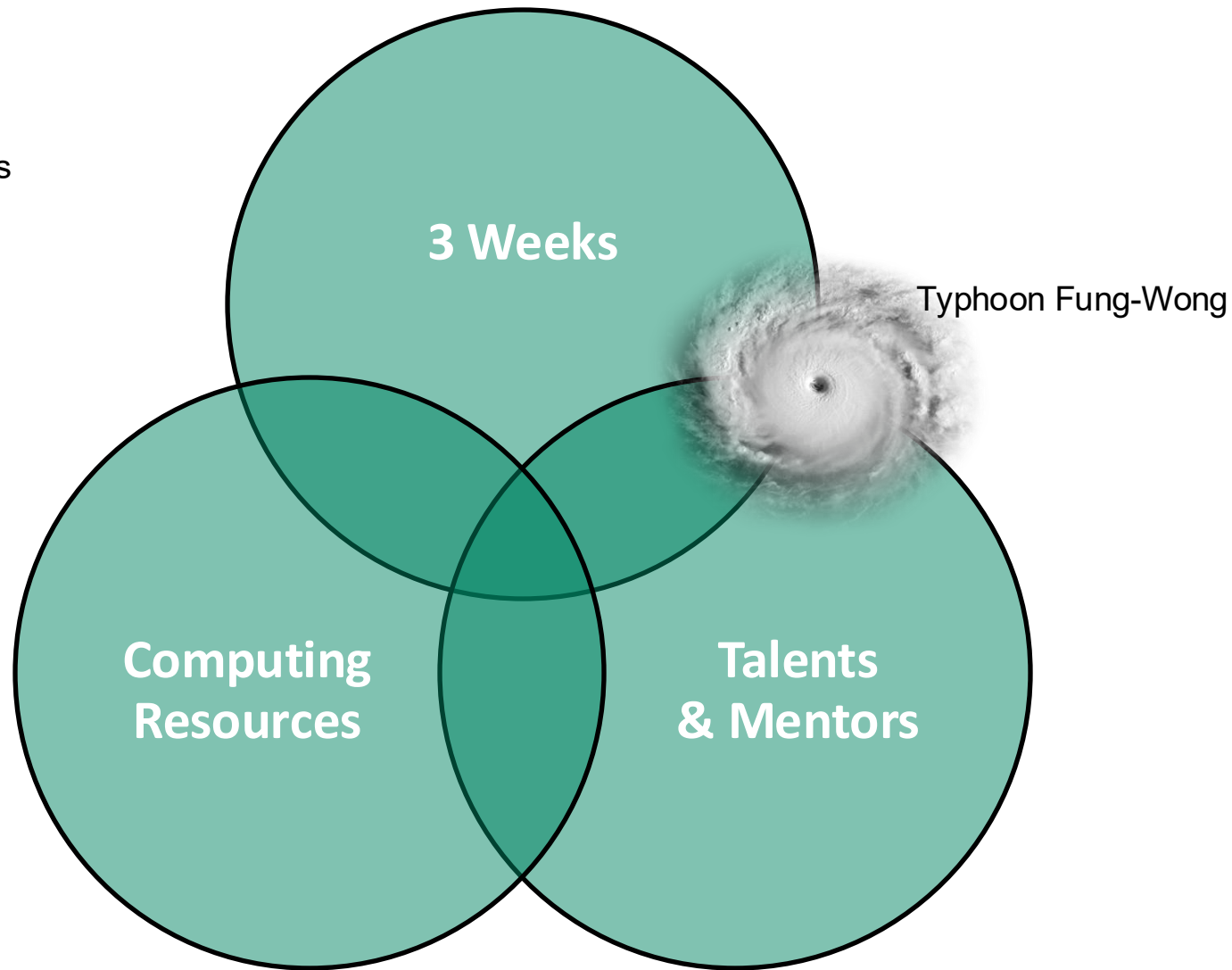
2025 NCHC Open Hackathon

Important Dates

- ~~● 10 / 22 (Wed) : Day 0: Kick-off Meeting 15:00~17:00 PM (Online)~~
 - ~~● 5-minute presentation per team~~
- ~~● 10 / 29 (Wed) : Day 1: Scrum #1 Meeting 15:00~16:00 PM (Online)~~
 - ~~● 5-minute presentation per team~~
- ~~● 11 / 05 (Wed) : Day 2: Scrum #2 Meeting 15:00~16:00 PM (Online)~~
 - ~~● 5-minute presentation per team~~
- **11 / 12 (Wed) : Final Day 10:00~16:00 PM (In-person at NCHC)**
 - **12-minute presentation + 3-minute Q&A per team**

It is not easy

Thanks Teams and Mentors



OPENACC – CELEBRATING 15 YEARS

Building Community.



Ecosystem
Development

Training/Education

OpenACC Specification



OpenACC
More Science, Less Programming

OPEN
HACKATHONS

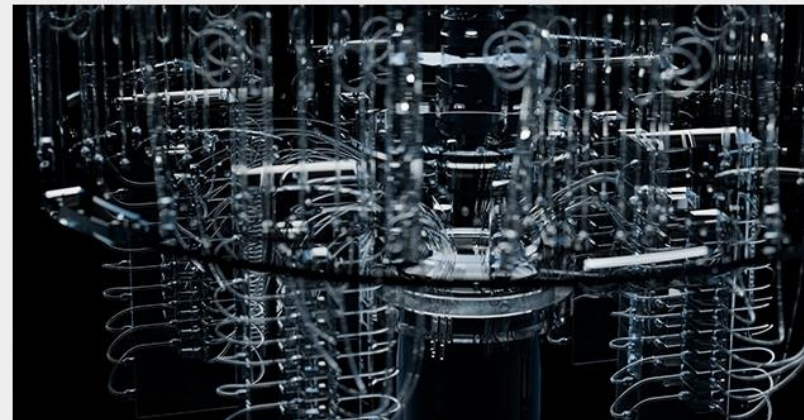
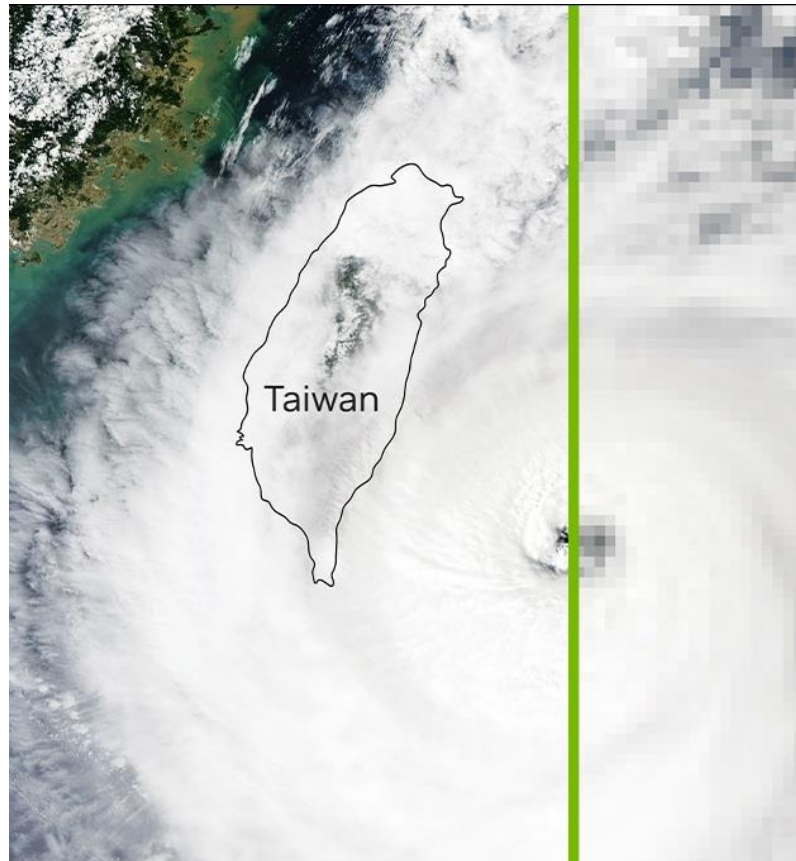
NCHC 國家高速網路與計算中心
National Center for High-performance Computing

NVIDIA

NCHC 超級電腦為台灣研究帶來大躍進

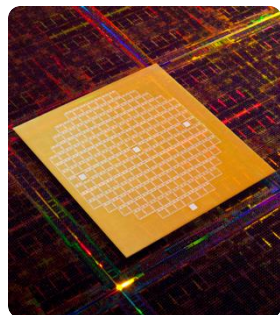
220*H200-NVL8 + 2*GB200-NVL72

<https://blogs.nvidia.com.tw/blog/taiwan-research-supercomputer/>



CUDA-X Accelerates Every Industry

6.5M+ Developers & 900+ SDKs/Models



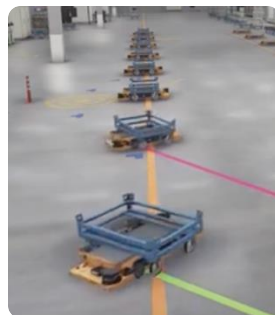
cuLitho

Computational
Lithography



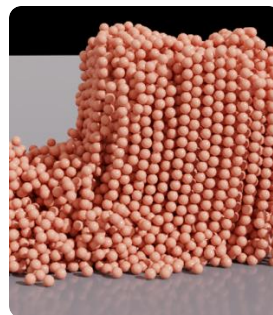
cuDSS

CAE



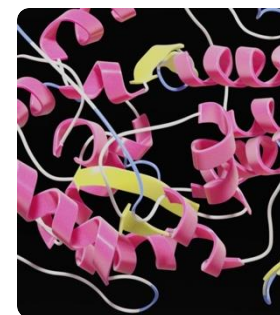
cuOpt

Decision Optimization



Warp

Physical Simulation



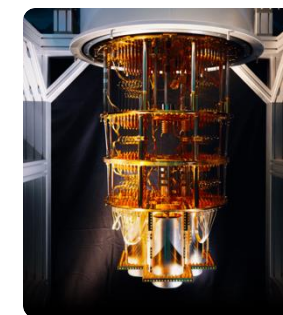
cuDF

Data Processing



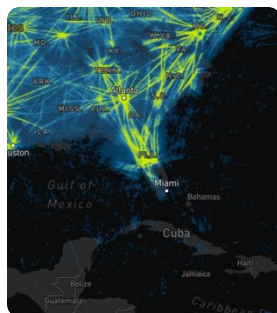
PhysicsNeMo

AI Physics



CUDA-Q

Quantum Computing



cuEquivariance

Drug & Materials
Discovery



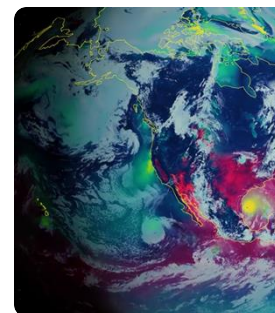
ALCHEMI

AI Materials Science



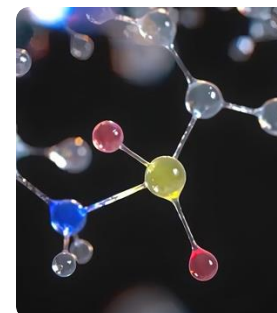
Holoscan

Edge HPC



Earth-2

Weather Analytics



Parabricks

Gene Sequencing



cuPyNumeric

Numerical Computing

NCHC x NVIDIA Workshops/Bootcamps/Hackathons

Since 2020

Events

50+

Developers

2300+



NCHC x NVIDIA Workshops/Bootcamps/Hackathons

Since 2020



智慧未來
先知先行
NCHC • AI Enabler

國網中心NCHC
@nchc3005 · 1.97K subscribers · 213 videos
國家高速網路與計算中心...more
nchc.org.tw and 2 more links
Subscribe

Home Videos Live Playlists

Latest Popular Oldest

OpenACC Hackathon

NCHC CUDA-Q Bootcamp 2025 - 量子計算
基礎教育訓練
81 views · 2 weeks ago

TAIWAN AI RAP_製造領域應用_UniAI
92 views · 2 months ago

TAIWAN AI RAP_大型語言模型
高效能AI平台介紹
https://rap.genai.nchc.org.tw/

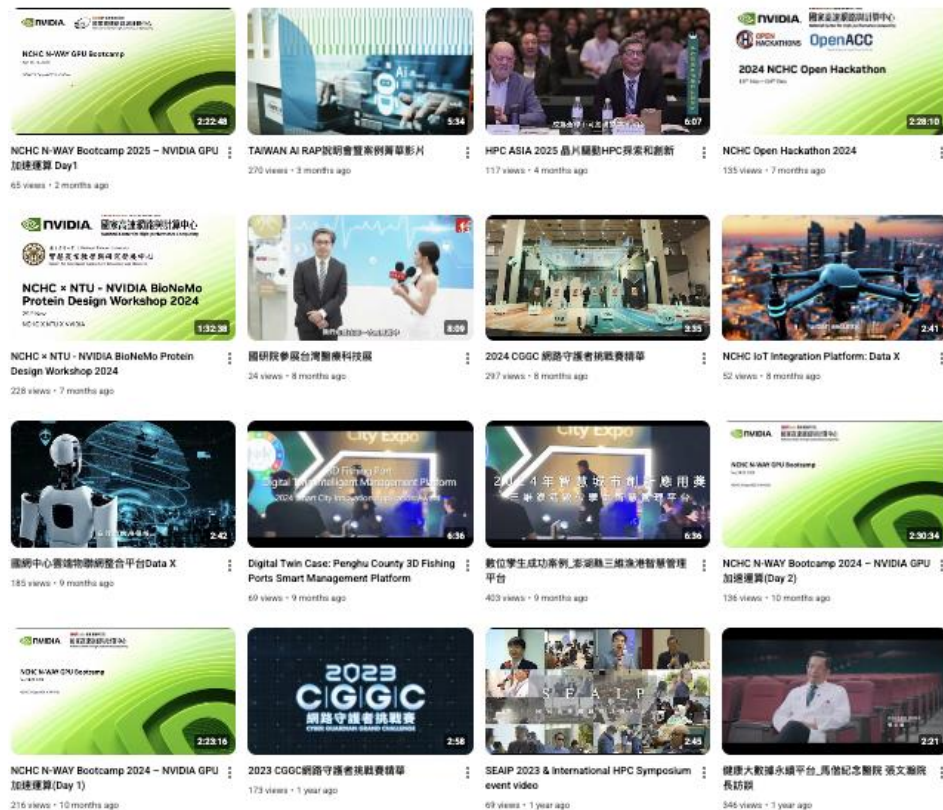
NCHC LLM Bootcamp 2025 - 大語言模型教
育訓練, Taiwan AI RAP
243 views · 2 months ago

NCHC Infrast LLM Bootcamp & Taiwan AI RAP Platform
1:58:19

NCHC LLM Bootcamp 2025 - 大語言模型教
育訓練 Day2
112 views · 2 months ago

NCHC LLM Bootcamp 2025 - 大語言模型教
育訓練 Day1
214 views · 2 months ago

NCHC N-WAY Bootcamp 2025 - NVIDIA GPU
加速運算 Day2
59 views · 2 months ago



NCHC N-WAY Bootcamp 2025 - NVIDIA GPU
加速運算 Day1
65 views · 2 months ago

TAIWAN AI RAP說明會暨案例精華影片
270 views · 3 months ago

HPC ASIA 2025 晶片驅動HPC發展和創新
117 views · 4 months ago

NCHC Open Hackathon 2024
155 views · 7 months ago

NCHC x NTU - NVIDIA BioNeMo Protein Design Workshop 2024
228 views · 7 months ago

國防研發院台灣國際科技展
24 views · 8 months ago

2024 CGGC 網路守護者挑戰賽精華
297 views · 8 months ago

NCHC IoT Integration Platform: Data X
52 views · 8 months ago

TAIWAN AI RAP_製造領域應用_UniAI
92 views · 2 months ago

TAIWAN AI RAP_教育領域應用_源智匯
79 views · 2 months ago

TAIWAN AI RAP_金融領域應用_環鴻資訊
42 views · 2 months ago

TAIWAN AI RAP_晶片設計應用_創鑫智慧
48 views · 2 months ago

國防中心雲域物聯網整合平台Data X
185 views · 9 months ago

Digital Twin Case: Penghu County 3D Fishing Ports Smart Management Platform
60 views · 9 months ago

數位孿生成功案例_澎湖縣三維漁港智慧管理
平台
403 views · 9 months ago

NCHC N-WAY Bootcamp 2024 - NVIDIA GPU
加速運算 Day2
136 views · 10 months ago

NCHC N-WAY Bootcamp
2:22:16

NCHC N-WAY Bootcamp 2024 - NVIDIA GPU
加速運算 Day1
216 views · 10 months ago

2023 CGGC 網路守護者挑戰賽精華
173 views · 1 year ago

SEAIP 2023 & International HPC Symposium
event video
69 views · 1 year ago

健康大數據永續平台_馬偕紀念醫院 張文淵院
長訪談
346 views · 1 year ago

Agenda

Welcome and Event Overview		10:00~10:15	
HPC Session		10:15-11:30	Speedup
Team-02	Usagi	10:30~10:45	777.7x
Team-06	PTSG Taiwan	10:45~11:00	15.0x
Team-04	Qa-MolGen	11:00~11:15	5417.9x
Team-10	CYCU Power Lab	11:15~11:30	109.2x
Break & Group Photo		11:30~11:45	

Lunch Time		11:45~13:15	
AI Session		13:15-15:00	Speedup
Team-09	Paw Patrol	13:30~13:45	8.5x
Team-03	Parallel	13:45~14:00	85.0x
Team-07	AI-Taiwan VVM	14:00~14:15	12.8x
Team-08	NDVIgnition	14:15~14:30	7.2x
Team-05	NYCU_Bocchi the CUDA!	14:30~14:45	4.6x
Wrap-up		14:45~15:00	

Invited Opening Speaker



Bharatkumar Sharma

NVIDIA Senior Technical Program Manager

- Tech Leader with years of experience in research, technology adoption, developer community, and mentoring at Hackathons.
- Engineering background in Parallel and High Performance Computing with proven abilities to build and manage remote teams at both technical and management level.
- Development and Research experience in the field of Software Architecture, Distributed, and Parallel Computing.
- Published papers and journal articles in the field of Parallel Computing and Software Architecture.

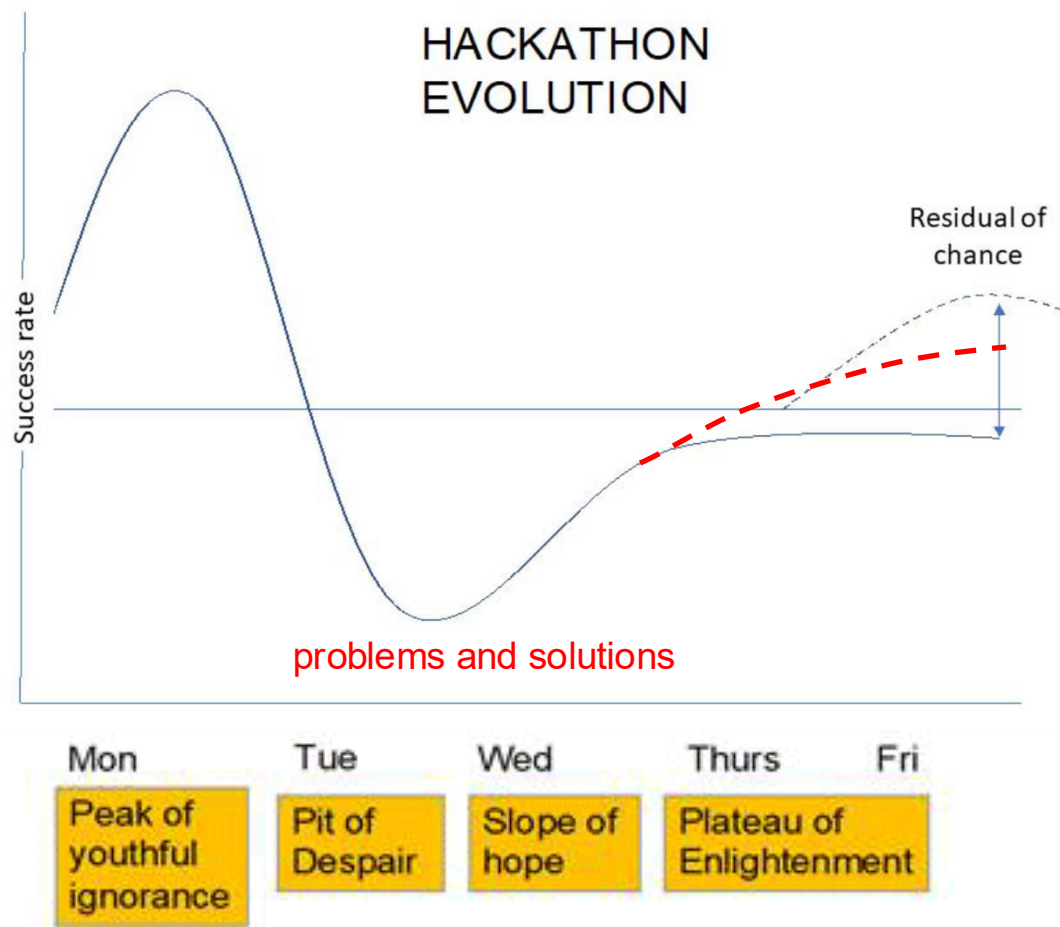
Invited Opening Speaker



Eric Kang

NVIDIA Senior Solution Architect Manager

Eric Kang leading the Solutions Architect team in NVIDIA, working with customers and partners to deliver the world's best solutions for artificial intelligence, deep learning and machine learning, professional visualization, and high-performance computing. Specializing in NVIDIA's advanced solutions architecture planning, he has in-depth research on high-performance computing and deep learning computing architecture and participates in relevant important projects architecture planning. Prior to joining NVIDIA, he served in HP Enterprise and as solutions consultant lead for data center transformation practice. Experience including high-performance computing, advanced data center planning, private cloud and public cloud management solutions, data center management automation.



This article highlights the Oak Ridge Leadership Compute Facility's GPU Hackathon
<https://www.computer.org/csdl/magazine/cs/2018/04/mcs2018040095/13rUxYIN88>

Agenda

Welcome and Event Overview		10:00~10:15	
HPC Session		10:15-11:30	Speedup
Team-02	Usagi	10:30~10:45	777.7x
Team-06	PTSG Taiwan	10:45~11:00	15.0x
Team-04	Qa-MolGen	11:00~11:15	5417.9x
Team-10	CYCU Power Lab	11:15~11:30	109.2x
Break & Group Photo		11:30~11:45	

Lunch Time		11:45~13:15	
AI Session		13:15-15:00	Speedup
Team-09	Paw Patrol	13:30~13:45	8.5x
Team-03	Parallel	13:45~14:00	85.0x
Team-07	AI-Taiwan VVM	14:00~14:15	12.8x
Team-08	NDVIgnition	14:15~14:30	7.2x
Team-05	NYCU_Bocchi the CUDA!	14:30~14:45	4.6x
Wrap-up		14:45~15:00	

Nov 16-21 SuperComputing 2025

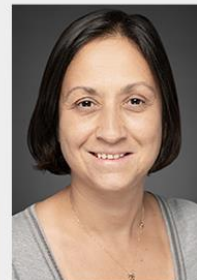
<https://www.nvidia.com/en-us/events/supercomputing/>



Save the Date

NVIDIA SC25 Fireside Chat

November 17 at 4:00 p.m. CT



Ian Buck (NVIDIA) will lead a discussion with global leaders:

- Ceren Susut (U.S. Department of Energy (DOE)),
- Dan Stanzione (Texas Advanced Computing Center (TACC)),
- Thomas Lippert (Jülich Supercomputing Centre (JSC)),
- and Satoshi Matsuoka (RIKEN).

Gain insights into how AI is revolutionizing drug discovery, astrophysics, materials science, and more.



Thank You

50+ contributors in this hackathon

2	Usagi	Lead	Hsin-Lu (葉欣綠) Yeh
		Member	Jui-En Li
		Member	Hsuan-Chi Liu
		Member	Tso-Fei Yen
		Member	Chia-Yi Chin
		Member	Jui-Chien Tsou
		Member	Wei-Chin Wang
		Member	Kuan-Hsun Tu
		Member	Fan-Shi Liu
3	Parallel	Mentor	Reese Wang
		Mentor	Johnson Sun
		Lead	KUAN-LIN (김채원) CHEN
		Member	SYUAN-HAO LI
		Member	CHIA-YU YANG
		Member	PIN-HSUAN HO
		Member	SHANG-CHE HSIEH
		Mentor	Ken Liao
		Lead	Yu cheng (蕭宇承) Xiao
4	Qa-MolGen	Member	Yu-Ze Chen
		Member	Shu-Chi Wu
		Member	Ka-Lok Ng
		Member	Astuti Aninda
		Member	Tsu-Ling Kuo
		Mentor	Pika Wang
		Lead	Chu-Siang Tseng
		Member	Cheng-Zong Li
		Member	Kai-Jie Lin
5	NYCU_Bocchi the CUDA!	Member	Hsien-Cheng Huang
		Mentor	Shijie Wang
		Mentor	Virginia Chen

6	PTSG Taiwan	Lead	Ming-Chieh (林銘杰) Lin
		Member	Cheng-Cheng Yeh
		Member	Feng-Hua Chang
		Mentor	Leo Chen
		Mentor	Yang-Hsien (+Chao-Shun) (+Richard) Lin (+ Zhan) (+ Huang)
		Lead	YI CHANG (陳逸昌) CHEN
		Member	Chun-Kai Hsu
		Member	Min-Ken Hsieh
		Mentor	Cliff Chiu
7	AI-Taiwan VVM	Mentor	Iven Fu
		Lead	HAN YIN CHANG
		Member	Ge-Han Wu
		Member	Ping Chen Hsieh
		Member	Chen-Yuan Chung
		Member	Pin-Cheng Chan
		Mentor	Rick Wu
		Lead	Chen-Hao (黃晨皓) Huang
		Member	Calvin Ku
8	NDVIgnition	Member	Zih-Syuan Jhan
		Member	TsungHsun Tsai
		Member	Pu Ching
		Member	ShangChing Liu
		Mentor	Johnson Sun
		Lead	Christian Lian Paulo Perez Rioflorido
		Member	Hoang Phuong Van
		Member	孟澤 李
		Mentor	Pika Wang
9	Paw Patrol	Lead	Chen-Hao (黃晨皓) Huang
		Member	Calvin Ku
		Member	Zih-Syuan Jhan
		Member	TsungHsun Tsai
		Member	Pu Ching
		Member	ShangChing Liu
		Mentor	Johnson Sun
		Lead	Christian Lian Paulo Perez Rioflorido
		Member	Hoang Phuong Van
10	CYCU Power Lab	Member	孟澤 李
		Mentor	Pika Wang

Staff	Infra Management	Johnson Sun
	Event Host	Jay Chen
	Account Manager	Vincent Chiu
	SA Manager	Eddie Huang
	SA Manager	Eric Kang
	DevTech Manger	Ryan Jeng
	Hackathon Team Manager	Bharat Kumar
	Hackathon Team	Apoorva Laharia
	Hackathon Team	Yash Gupta
	Marketing	Jinny Lin
	NCHC host	Zhoujin Wu
	LLM Mentors	宜庭 蔡
	LLM Mentors	祐萱 林

Thank You

Feedback Survey: <https://forms.office.com/r/aB2aXG0Wc8>

- A100/H100 Cluster will be reset by today, please backup your data!
- Welcome any feedback by scanning the QR code.

