Benedict Tiong

Curriculum Vitae

PERSONAL DETAILS

Mail	benedict.cs12@nycu.edu.tw
Website	https://benedict-cs.github.io/Me/

EDUCATION

MSc. Department of Computer Science (GPA: 4.15 / 4.30) 2023 - Now

National Yang Ming Chiao Tung University

Advisor: Prof. Chien-Chao Tseng (Wireless Internet Laboratory)

- Kubernetes, CI/CD, DevOps, and Cloud-Native Technologies
- SDN, NFV, O-RAN, 5G/6G Networks

BSc. Department of Interaction Design (GPA: 3.99 / 4.00) 2019 - 2023

National Taipei University of Technology

Advisor: Prof. Lydia Hsiao-Mei Lin

Docker, Backend Service Development, RESTful API

- Application of Embedded Systems, Application of AI, IoT System
- Virtual Reality, Augmented Reality, Game Development

RESEARCH INTERESETS

- Linux Networking, IT Automation, Kubernetes, CI/CD, DevOps, and Cloud-Native
- Operating System Design and Implementation, Computer Architecture, Computer System

WORK EXPERIENCES

SDN&NFV Teaching Assistant · Part-time · On-site Aug 2023 - Jan 2024

Department of Computer Science, NYCU

- Virtual Infrastructure and Management - Container and Kubernetes
- SDN, NFV, ONOS, OVS, Java, Python

Software Engineer · Intern · Hybrid Jul 2022 - Jun 2023

IT Department, Makalot Industrial Co., Ltd.

- Develop a Robust Backend System and Automate the Service
- ASP.NET Core, Vue.js, SQL Server, Docker, Graph API, Power Automate

Administration Assistan · Part-time · On-site Jun 2021 - Jun 2023

Computer and Network Center, NTUT

- Assist faculty and students with troubleshooting computer and network issues
- Reinstall the operating system on a computer

Project Engineer · Part-time · Hybrid Jan 2022 - Jun 2022

Department of Multimedia and Game Development, MUST

- Integrating the Digital Kinesthetic Teaching Model into Parent-Child Centers
- Game Development, Unity, C#, Firebase

AWARDS & PROJECTS

Potential Award of XR Social Welfare Development in Vision Get Wild - 2023

Issued by Meta XR Hub Taiwan

Developed and designed an Augmented Reality (AR) mobile app to monitor all critical manhole covers in Taipei City. The system, which integrates captivating images with local flair, encourages people to collaboratively track the aging issues of these covers and provide real-time feedback to the responsible authorities.

Shortlisted Cross-Disciplinary category in Vision Get Wild - 2023

Issued by Administration for Digital Industries

A mobile app that combines tourism, cultural promotion, and urban maintenance through the innovative use of Augmented Reality (AR) in partnership with Taipei Hydraulic Engineering Office , Taipei Gorgeous Manhole Covers.

Best Presentation Award in Makerthon National Tournament - 2023

Issued by Ministry of Education

Created embedded systems applications for visualizing the composting of organic matter for improved waste categorization practices in mountains areas, resulting in significant improvement in overall environmental conservation.

Best Value Creation Award in Makerthon Regional Tournament - 2023

Issued by Ministry of Education

An art installation that enables hikers to observe the complete decomposition and natural transformation of organic waste into fertilizer, nourishing the entire forest ecosystem through the intricate biological processes of time and microbial activity.

Jury Prize (Champion) in Makerthon National Tournament - 2022

Issued by Ministry of Education

Created and designed a embedded systems applications that integrates sensors with an app, combining traditional Taiwanese window grille aesthetics with the air purification properties of green algae. Users can check the air quality in their homes anytime by simply opening the mobile application.

Best Design Award in Makerthon Regional Tournament - 2022

Issued by Ministry of Education

A filtering system inspired by the feeding behavior of nurse sharks. It enables aquatic life in rivers to swim through the filtration system, leaving behind the debris. This innovative solution effectively reduces the presence of floating debris in water bodies, ensuring a clean habitat for riverine wildlife.

Shortlisted Digital Entertainment category in 5G Mobliehero - 2021

Issued by Industrial Development Administration

Designed and developed an interactive night run fitness device, incorporating the features of 5G Massive Internet of Things (IoT), electronic integration design, and real-time cloud integration with a mobile app. Targeted at the possibility of remote running during the pandemic.

Shortlisted AI Experiment in Intel® DevCup x OpenVINO™ Toolkit - 2021

Issued by Intel Corporation

Training a AI model for object detection on a Raspberry Pi 4, combined with the Intel® Neural Compute Stick 2, and integrated development using the OpenVINO Toolkit. And improve room organizing experience to efficiently tidy up their space

SCHOLARSHIPS

- Presidential Award (GPA: 4.00/4.00) - 2019 Fall Semester
- Presidential Award (GPA: 4.00/4.00) - 2020 Spring Semester
- Presidential Award (GPA: 4.00/4.00) - 2021 Spring Semester
- Outstanding Graduation Grade Award (GPA: 3.99/4.00) - 2023
- Most Excellent Overseas Student Graduate Award - 2023
- Academic Competition Excellence Award - 2022 Fall Semester
- Academic Competition Excellence Award - 2023 Spring Semester
- Academic Competition Excellence Award - 2023 Fall Semester

CERTIFICATES

- 805 Score TOEIC Listening and Reading Test issued by Educational Testing Service - 2024
- Program in Artificial Intelligence and Virtual Reality issued by NTUT - 2023
- AI-900 Microsoft Azure AI Fundamentals issued by Microsoft - 2023
- Fundamentals of Deep Learning issued by NVIDIA - 2022
- Getting Started with AI on Jetson Nano issued by NVIDIA - 2022
- Completion of Java OCP JP Training issued by Digital Governance Association - 2021

BIOGRAPHY & MOTIVATION

Hi, my name is Benedict Tiong, or you can call me Ben for short. I'm Malaysian, so I was born and raised there. However, for about the last five years, I have decided to pursue my education in Taiwan. So, I graduated from the National Taipei University of Technology (NTUT) with a Bachelor of Science in Interaction Design. Then, I kept pursuing a master's degree in computer science at the National Yang Ming Chiao Tung University (NYCU). I continued my postgraduate study because I was interested in what I learned.

I interned in the IT department of Makalot company for about one year. I was a backend software engineer at Makalot, and my jobs included containerizing the existing application, building the microservice application, and implementing some IT automation routines. This internship provided me with hands-on experience in IT operations and software development, which really reinforced my technical skills.

TAIPEI TECH 國立臺北科技大學

National Taipei University of Technology

The President of National Taipei University of Technology,
on the Recommendation of the Faculty, Has Conferred upon

BENEDICT TIONG ING NGIE （張永義）

Who Has Satisfactorily Fulfilled All Requirements for
the Degree of

BACHELOR OF SCIENCE

in Interaction Design,

with All the Rights, Privileges, and Honors Thereunto Appertaining,
in Witness Whereof the Seal of the University and the Signature of
the Proper Authority Is Hereunto Affixed.
Given in Taipei, Taiwan, Republic of China
The Thirtieth of June, in the Year of Two Thousand and Twenty Three

PRESIDENT OF THE UNIVERSITY

PROVOST OF ACADEMIC AFFAIRS

Student ID NO.108AC1033

國立臺北科技大學

Fundamentals of Deep Learning - NVIDIA DLI

Getting Started with AI on Jetson Nano - NVIDIA DLI

Completion of Java OCP JP

Potential Award of XR Social Welfare Development

臺教技（三）字第1120058061號

教育部獎狀

國立臺北科技大學劉芝良、張永義、黃亭中同學組成之「互動小築」隊伍參加教育部「2023年技職盃黑客松競賽」全國賽成績優異榮獲最佳簡報獎

特頒獎狀 以資鼓勵

部長潘文忠

中華民國 112 年 6 月 12 日

Best Presentation Award
Makerthon National Tournament 2023

臺教技（三）字第1120058061號

教育部獎狀

國立臺北科技大學劉芝良、張永義、黃亭中同學組成之「互動小築」隊伍參加教育部「2023年技職盃黑客松競賽」北區分區賽成績優異榮獲最佳創造價值獎

特頒獎狀 以資鼓勵

部長潘文忠

中華民國 112 年 6 月 12 日

Best Value Creation Award
Makerthon Regional Tournament 2023

臺教技（三）字第1110053316號

教育部獎狀

國立臺北科技大學劉芝良、張永義、王品勻同學組成之「互動客」隊伍參加教育部「2022黑客松：技職盃全國大賽」成績優異榮獲評審團大獎

特頒獎狀 以資鼓勵

部長潘文忠

中華民國 111 年 5 月 30 日

Jury Prize (Champion)
Makerthon National Tournament 2022

Best Design Award
Makerthon Regional Tournament 2022

Shortlisted AI Experiment
Intel® DevCup x OpenVINO™ Toolkit 2021

Shortlisted Digital Entertainment category
5G Mobliehero 2021

國立臺北科技大學書卷獎獎狀

北科大教字第 1090100096 號

本校　　互動設計系　　一 年級
學生　張永義　於一百零八學年度第一學期學業成績優異勘殊嘉許特頒獎狀以資獎勵

校 長 王錫福

中華民國一〇九年四月二十三日

Presidential Award - 2019 Fall

國立臺北科技大學書卷獎獎狀

北科大教字第 1090100411 號

本校　　互動設計系　　一 年級
學生　張永義　於一百零八學年度第二學期學業成績優異勘殊嘉許特頒獎狀以資獎勵

校 長 王錫福

中華民國一〇九年十月二十六日

Presidential Award - 2020 Spring

國立臺北科技大學書卷獎獎狀

北科大教字第 1100130074 號

本校　　互動設計系　　二 年級
學生　張永義　於一百零九學年度第二學期學業成績優異勘殊嘉許特頒獎狀以資獎勵

校 長 王錫福

中華民國 110 年 11 月 10 日

Presidential Award - 2021 Spring

獎　狀

北科大學字第 1090200403 號

本校 互動設計系 張永義 同學(學號：108AC1033) 於 108 學年度第 2 學期學業、操行、體育三育成績優異，特頒獎狀以資鼓勵。

校長 王錫福

中華民國 109 年 12 月 22 日

Tri-excellence Award - 2019 Spring

獎　狀

北科大學字第 1100200156 號

本校 互動設計系 張永義 同學(學號：108AC1033) 於 109 學年度第 1 學期學業、操行、體育三育成績優異，特頒獎狀以資鼓勵。

校長 王錫福

中華民國 110 年 5 月 25 日

Tri-excellence Award - 2020 Fall

獎　狀

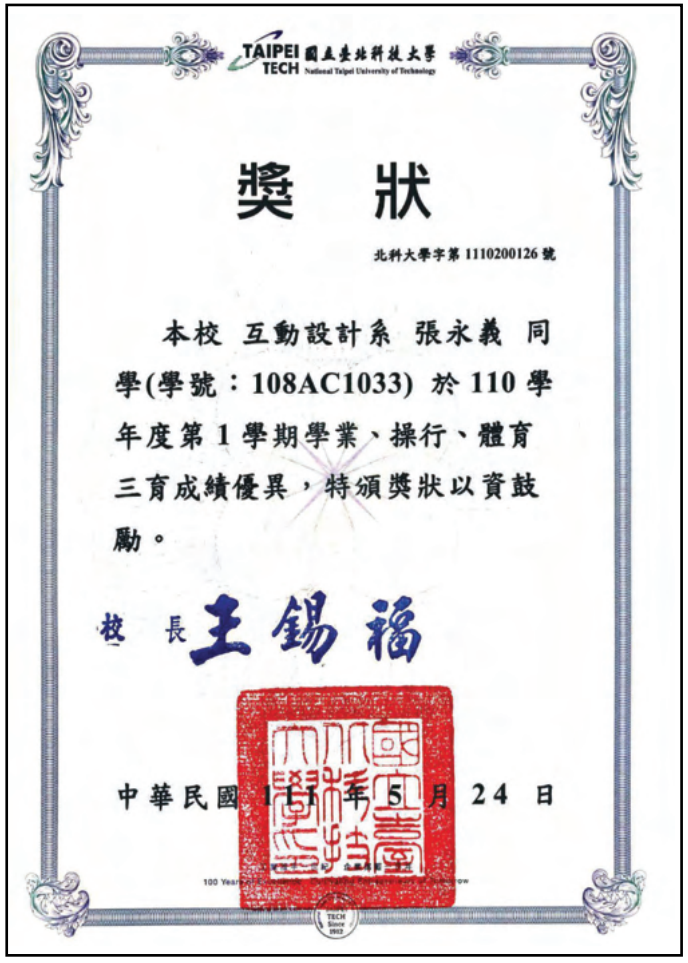
北科大學字第 1100230115 號

本校 互動設計系 張永義 同學(學號：108AC1033) 於 109 學年度第 2 學期學業、操行、體育三育成績優異，特頒獎狀以資鼓勵。

校長 王錫福

中華民國 110 年 12 月 14 日

Tri-excellence Award - 2020 Spring



獎　狀

北科大學字第 1110200126 號

本校 互動設計系 張永義 同學(學號：108AC1033) 於 110 學年度第 1 學期學業、操行、體育三育成績優異，特頒獎狀以資鼓勵。

校長 王錫福

中華民國 111 年 5 月 24 日

Tri-excellence Award - 2021 Fall

國立臺北科技大學獎狀

北科大教字第 1120100163 號

學生張永義於 111 學年度互動設計系應屆畢業學業成績 第二名 特頒獎狀以資鼓勵

校長 王錫福

中華民國 112 年 6 月 10 日

Outstanding Graduation Grade Award 2023

僑務委員會獎狀

僑生聯字第 1120501218 號

國立臺北科技大學互動設計系學生張永義品學兼優表現傑出足堪楷模特頒2023年畢業僑生僑務委員會委員長獎以資表揚

委員長 徐佳青

中華民國 112 年 5 月 24 日

Certificate of Merit

Certificate Number: 1120501218
Date: May 24, 2023

The OCAC MINISTER SCHOLARSHIP is hereby granted to ***BENEDICT TIONG ING NGIE*** *for his excellent performance in academic achievement at National Taipei University of Technology*

Hsu, Chia-ching

Minister Hsu, Chia-Ching
Overseas Community Affairs Council
R. O. C. (Taiwan)

Excellent Overseas Student Graduate Award 2023

僑務委員會獎狀

僑生聯字第 1120501006 號

國立臺北科技大學111學年度畢業僑生張永義，在學期間學行表現傑出，特頒此狀以資鼓勵。

委員長 徐佳青

中 華 民 國 112 年 5 月 11 日

Certificate of Merit

Certificate Number：1120501006

Date: May 11, 2023

*This certificate is hereby awarded to **BENEDICT TIONG ING NIGE**, an overseas compatriot student graduated from National Taipei University of Technology in recognition of outstanding academic performance and good behavior during his/her school years.*

Hsu . chia-ching

Minister Hsu, Chia-Ching
Overseas Community Affairs Council
R.O.C. (Taiwan)

Excellent Overseas Student Award 2023

僑務委員會獎狀

僑生聯字第 1110501029 號

國立臺北科技大學馬來西亞學生張永義努力向學榮獲本會111年度受理捐贈僑生獎學金特頒此狀以資鼓勵

委員長 童振源

中 華 民 國 111 年 5 月 10 日

Certificate of Merit

Certificate Number：1110501029

This award is hereby granted to TIONG ING NGIE BENEDICT with a scholarship of NTD 10,000 for his/her outstanding academic performance in 2022

Tung . Chen-Yuan

Amb. Tung, Chen-Yuan, Ph.D.
Minister, Overseas Community Affairs Council
Republic of China (Taiwan)

Excellent Overseas Student Award 2022

僑務委員會獎狀

僑生聯字第 1090502889 號

國立臺北科技大學馬來西亞學生張永義榮獲本會109年度學行優良僑生獎學金特頒此狀以資鼓勵

委員長 童振源

中 華 民 國 109 年 12 月 22 日

Certificate of Merit

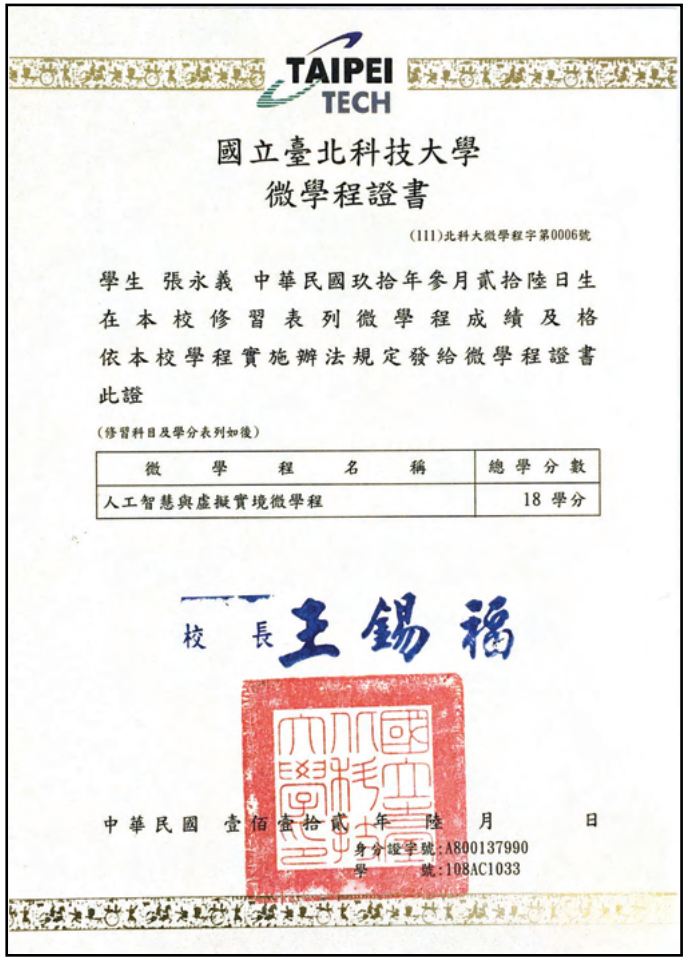
Certificate Number：1090502889

This award is hereby granted to TIONG ING NGIE BENEDICT with a scholarship of NTD 5,000 for his/her outstanding academic performance and dedication in 2020

Tung . Chen-Yuan

Amb. Tung, Chen-Yuan, Ph.D.
Minister, Overseas Community Affairs Council
Republic of China(Taiwan)

Excellent Overseas Student Award 2020



TAIPEI TECH

國立臺北科技大學

微學程證書

(III)北科大微學程字第0006號

學生 張永義 中華民國玖拾年參月貳拾陸日生
在本校修習表列微學程成績及格
依本校學程實施辦法規定發給微學程證書
此證

(修習科目及學分表列如後)

微學程名稱	總學分數
人工智慧與虛擬實境微學程	18 學分

校長 王錫福

中華民國 壹佰壹拾貳 年 陸 月 日

身分證字號:A800137990
學號:108AC1033

Program in Artificial Intelligence
and Virtual Reality 2023

Microsoft

考試分數報告

考生	考試
張 永義 1, Sec. 3, Zhongxiao E. Rd., Taipei 10608 Taiwan Taipei 10608 benedict.cs12@nycu.edu.tw	AI-900: Microsoft Azure AI Fundamentals 註冊編號: 449475106 考試參考號: 44124550 日期：May 10, 2023 ID: Benedict1033

結果	100	200	300	400	500	600	700	800	900	1000
必須達到分數										
您的分數										

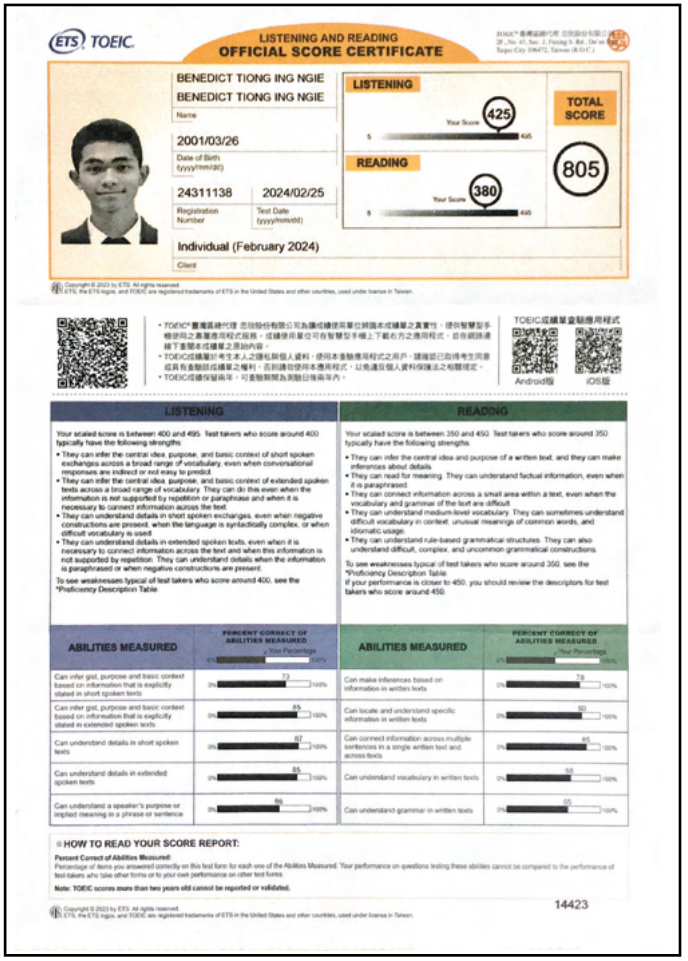
小節分析	
描述人工智慧工作負載與考量(20-25%)	83%
說明Azure 上機器學習的基本準則(25-30%)	84%
說明Azure 上電腦視覺工作負載的功能(15-20%)	80%
說明Azure 上自然語言處理(NLP) 工作負載的功能(25-30%)	88%

總分	
必須達到分數	700
您的分數	842

結果	
合格	✓

CERTIPORT

AI-900 Microsoft Azure AI Fundamentals
Microsoft 2023



ETS TOEIC

LISTENING AND READING
OFFICIAL SCORE CERTIFICATE

BENEDICT TIONG ING NGIE
BENEDICT TIONG ING NGIE
Name

2001/03/26
Date of Birth (yyyy/mm/dd)

24311138
Registration Number

2024/02/25
Test Date (yyyy/mm/dd)

Individual (February 2024)
Client

LISTENING
Your Score 425
5 495

READING
Your Score 380
5 495

TOTAL SCORE
805

TOEIC成績單查驗應用程式
Android版 iOS版

LISTENING

Your scaled score is between 400 and 495. Test takers who score around 400 typically have the following strengths:

- They can infer the central idea, purpose, and basic context of short spoken exchanges across a broad range of vocabulary, even when conversational responses are indirect or not easy to predict.
- They can infer the central idea, purpose, and basic context of extended spoken texts across a broad range of vocabulary. They can do this even when the information is not supported by repetition or paraphrase and when it is necessary to connect information across the text.
- They can understand details in short spoken exchanges, even when negative constructions are present, when the language is syntactically complex, or when difficult vocabulary is used.
- They can understand details in extended spoken texts, even when it is necessary to connect information across the text and when this information is not supported by repetition. They can understand details when the information is paraphrased or when negative constructions are present.

To see weaknesses typical of test takers who score around 400, see the *Proficiency Description Table.

READING

Your scaled score is between 350 and 450. Test takers who score around 350 typically have the following strengths:

- They can infer the central idea and purpose of a written text, and they can make inferences about details.
- They can read for meaning. They can understand factual information, even when it is paraphrased.
- They can connect information across a small area within a text, even when the vocabulary and grammar of the text are difficult.
- They can understand medium-level vocabulary. They can sometimes understand difficult vocabulary in context, unusual meanings of common words, and idiomatic usage.
- They can understand rule-based grammatical structures. They can also understand difficult, complex, and uncommon grammatical constructions.

To see weaknesses typical of test takers who score around 350, see the *Proficiency Description Table.

If your performance is closer to 450, you should review the descriptors for test takers who score around 450.

ABILITIES MEASURED	PERCENT CORRECT OF ABILITIES MEASURED (Your Percentage)
Can infer gist, purpose and basic context based on information that is explicitly stated in short spoken texts	73
Can infer gist, purpose and basic context based on information that is explicitly stated in extended spoken texts	85
Can understand details in short spoken texts	87
Can understand details in extended spoken texts	85
Can understand a speaker's purpose or implied meaning in a phrase or sentence	69

ABILITIES MEASURED	PERCENT CORRECT OF ABILITIES MEASURED (Your Percentage)
Can make inferences based on information in written texts	78
Can locate and understand specific information in written texts	80
Can connect information across multiple sentences in a single written text and across texts	85
Can understand vocabulary in written texts	68
Can understand grammar in written texts	85

HOW TO READ YOUR SCORE REPORT:

Percent Correct of Abilities Measured:
Percentage of items you answered correctly on this test form for each one of the Abilities Measured. Your performance on questions testing these abilities cannot be compared to the performance of test-takers who take other forms or to your own performance on other test forms.

Note: TOEIC scores more than two years old cannot be reported or validated.

14423

TOEIC Listening and Reading Test 2024

yahoo! 新聞

901 人追蹤 ☆ 追蹤

「2022黑客松 技職盃全國大賽」總決賽 北科大獲「評審團大獎」

國立教育廣播電台
2022年5月16日

國立臺北科技大學互動客團隊作品「綠窗花_清淨空氣的社區植栽運動」，榮獲評審團大獎

yahoo! 新聞

35.4k 人追蹤 ☆ 追蹤

北科大學生設計「蓋水好行」觀光App (圖)

The Central News Agency 中央通訊社
2023年5月11日

台北科技大學互動設計系學生團隊設計「蓋水好行」觀光App，透過人孔蓋上的AR互動及App圖鑑，可前往當地特色景點，與吉祥物一起達成各項成就。（北科大提供）

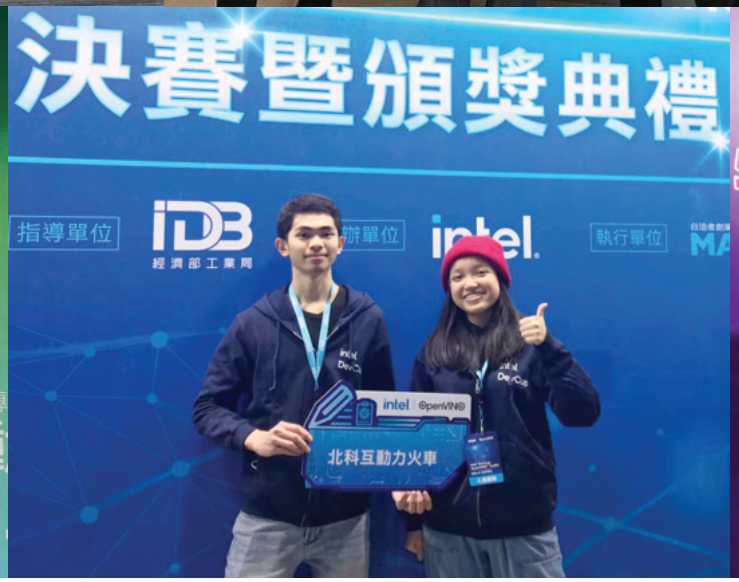
中央社記者許秩維傳真 112年5月11日


VISION GET WILD 接力▶未來 VISION GET W
2023 放視大賞
XR 社會公益獎
發展潛力獎
2 萬元


2023黑客松
MAKERTHON
技職盃全國大賽
最佳簡報獎
NT$ 20,000


總獎金高達
65萬
2023黑客松
MAKERTHON 技職盃：北區分賽
2023黑客松
MAKERTHON 技職盃：北區分賽
最佳創造
價值獎
新臺幣 伍仟元整
NTD. 5,000


2022
MAKERTH
GOOD HEAL
2022
MAKERTHON
最佳設計獎
北區競
分區賽4


決賽暨頒獎典禮
指導單位
經濟部工業局
intel
執行單位
intel OpenVINO
北科互動力火車


20th 通訊大賽
2021 MOBILEHEROES
5G領航創新
5G領航創新應用競賽