

清華大學資訊工程學系特殊選才 面試簡報

報告人：明道中學 詹挹辰

個人簡介－詹挹辰

個人優勢：

- 多益 950 金色證書
- APX 數學高級銅牌 (全國前5%)
- APCS 觀念5 / 實作 4
- 資訊學科能力競賽 全國三等獎
- 明道中學 MDCPP 共同創辦人



踏上資訊工程學習之旅

- 競賽生涯
- MDCPP：明道程式競賽培訓計畫
- 沉浸於程式設計的時光
- 未來展望與自我期許

競賽生涯

1. 數學競賽
2. 演算法競賽
3. 資安競賽

一、數學競賽 – 踏進資訊領域的契機

- 國小 ~ 國中主要在數學競賽方面發展
- 高中持續參與數學競賽
 - TRML 團體金牌
 - ARML 台灣個人金牌
 - APX 數學高級銅牌
- 數學競賽成為踏進資訊領域的契機

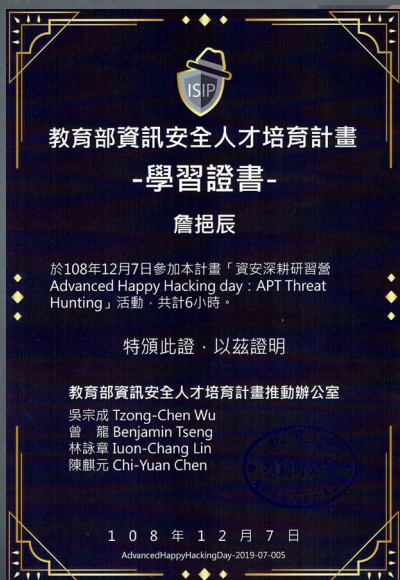
二、演算法競賽

- 高一APCS選修課
- APCS (初次 4 / 3 -> 現在 5 / 4)
- 109 資訊學科能力競賽全國三等獎
- 2020 七月 清大資工營
- 2021 一月 程式競賽解題培訓營

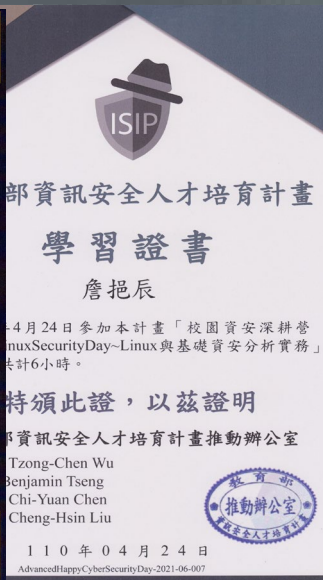
	觀念題	實作題
2020/01/05	4級 (76分)	3級 (200分)
2020/10/17	5級 (92分)	4級 (320分)
2021/01/09	5級 (92分)	4級 (320分)

三、資安競賽

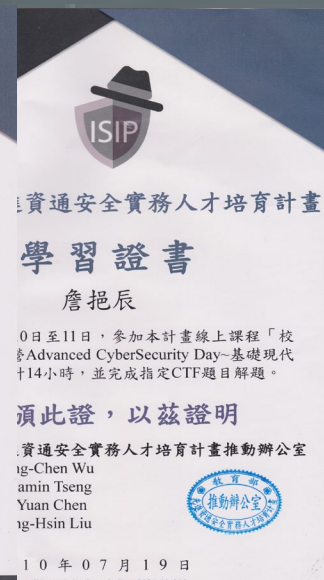
- 參加校園資安深耕營 – APT Threat Hunting, Linux, Crypto, Pwn 課程
- 2021成大T貓盃 基礎實務組特優



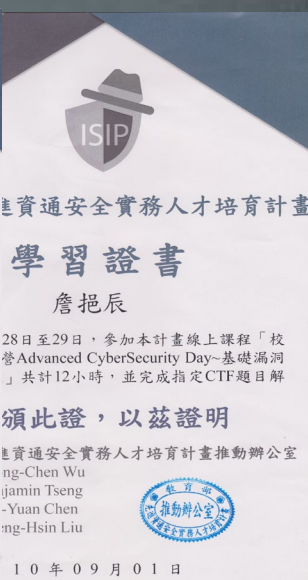
APT Threat Hunting
108/12/07



Linux
110/04/24



Crypto
110/07/10,11



Pwn
110/08/28,29



MDCPP

- MDCPP 明道程式競賽培訓計畫
 - 時間：高二整年
- 明道第一個程式競賽讀書會
- 明道最大社團－參與人數 206 人次
 - 對象橫跨 國中部、高中部、高職部、國際部
- 由學生擔任講師指導學員程式競賽
- 角色與任務：共同創辦人(總召)、講師



*MingDao
Competitive
Programming
Project*



MDCPP

- 編寫許多課程講義
- 利用網站放競程教學與心得文

- 競程介紹與基本技巧
- 動態規劃介紹
- 基礎資料結構
- 小群體定理
- 區間問題探討
- 演算法中的線性代數
- 組合賽局理論
- 動態規劃與優化
- 那些可愛的根號算法



The screenshot shows a web browser displaying a page titled "iceylemon 的程式小空間". The page content is about "SOS 優化" (SOS Optimization). The left sidebar contains a navigation menu with items like "Data Structure", "Dynamic Programming", "DP Time", "DP OPT Time", "前綴和優化", "矩陣快速幂優化", "資料結構優化", "SOS 優化", "單調隊列優化", "斜率優化 (Convex Hull Trick)", "四邊形優化", and "Aliens 優化". The main content area has the title "SOS 優化" and a subtitle "SOS DP · Sum over Subsets Dynamic Programming · 又稱高維前綴和，多用來解決子集類的求和問題". Below the title is a section "概述" (Overview) which discusses the complexity of the problem and how SOS DP can optimize it. The text mentions that the complexity is 3^N but can be reduced to $N \cdot 2^N$ using SOS DP. It also provides a definition for the function $F(i) = \sum_{j \subseteq i} A[j]$ and explains how to use DP to solve the problem.

沉浸於程式設計的時光

高一整年 數物化免修 + 資訊課 每個禮拜 9+2+1 節課 => 每周 10 hrs

高二整年 學科能力競賽/資奧 賽前培訓公假 => 每周 4 hrs

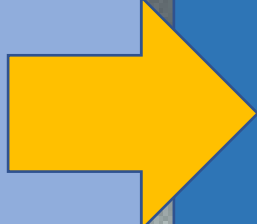
回家練習 平日 1 ~ 3 小時 假日 4~6 小時 => 每周 15 hrs

兩年總計： $10 * 20 + 2 * 20 + 2 * 15 * 20 = 840$ 小時

未來展望與自我期許

• 近程

- 推廣程式競賽教育
- 競程論壇



• 中程

- 清大資工營 IONC
- ICPC / NCPC
- 競程論壇



• 遠程

- 繼續攻讀研究所
- 資訊安全

簡報結束，敬請指教

補充證明 多益 950 證明

ETS TOEIC

唐紀辰

JAN YI-CHEN

Name

2003/11/25

Date of Birth
(yyyy/mm/dd)

21257265

Registration
Number

2021/09/26

Test Date
(yyyy/mm/dd)

Individual (September 2021)

Client

LISTENING AND READING
OFFICIAL SCORE CERTIFICATE

LISTENING

5

400

470

Your Score

READING

5

400

480

Your Score

TOTAL
SCORE

950

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TOEIC成績單保留兩年，可查閱期間為測驗日後兩年內。

TOEIC成績單專屬應用程式

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 close to 450. Test takers who score around 450 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 an entire text, and they can make connections between two related texts.
- They can understand a broad range of vocabulary, unusual meanings of common words, and idiomatic usage. They can also make distinctions between the meanings of closely related words.
- 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 450, see the *Proficiency Description Table.

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

86

Can infer gist, purpose and basic context based on information that is explicitly stated in short spoken texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

90

Can make inferences based on information in written texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

91

Can infer gist, purpose and basic context based on information that is explicitly stated in extended spoken texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

100

Can locate and understand specific information in written texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

91

Can understand details in short spoken texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

91

Can connect information across multiple sentences in a single written text and across texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

93

Can understand details in extended spoken texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

91

Can understand vocabulary in written texts

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

71

Can understand a speaker's purpose or implied meaning in a phrase or sentence

ABILITIES MEASURED

PERCENT CORRECT OF ABILITIES MEASURED

Your Percentage

0% 100%

95

Can understand grammar in written texts

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.

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