

Hong Kong Monetary Authority
“Financial Special Forces: Unleashing New Horizons” Video Series

Episode 1 - Data Science
The Secrets of Speech: AI-Powered Data Decoding

Lung: Hello Yoshi!

Yoshi: Lung!
What’s the plan for today?

Lung: I heard we’re going to join an internship!

Voice-over: That’s right!
In recent years, there have been significant changes
in the financial industry in Hong Kong
Now, we are sending you to four companies to explore
the job opportunities for young talents
in the respective areas in the financial market

Lung: Got it! Let’s go!

Voice-over: Hold on! There will be many challenges ahead!

Yoshi: It’ll be fine! We’ve start-up experience
it shouldn’t be difficult for us! Bye!

Voice-over: Hey! I haven’t even mentioned the title of the mission yet

SUPER: Financial Special Forces: Unleashing New Horizons
Episode 1
Data Science
The Secrets of Speech: AI-Powered Data Decoding

Lung: Hello, everyone!
I’m Lung!
I’m here for an internship
I’m 37 years old and I’m a Taurus!
Nice to meet you all, I’m excited to learn from everyone

Lung: What’s wrong? Can’t I be an intern even if I’m a bit mature?

Dr. Albert Lam: Calm down
The Data Science field welcomes
talents from different backgrounds
You may be too passionate and scared everyone

SUPER: Dr. Albert Lam
Chief Scientist & Chief Technology Officer

Lung: Did I scare you that easily?
By the way, may I ask which areas
your company's Data Scientists specialise in?

Dr. Albert Lam: Two words, Speech Recognition
The Artificial Intelligence (AI) system we developed
can convert telephone enquiries received by banks every day
into text records quickly
thus creating an immensely large database
Together with the data analysis technology
it can accomplish tasks that were previously impossible
or time-consuming to do manually
For example, it can uncover new business opportunities
in the financial market
detect potential fraud or non-compliant behaviour
and optimise sales processes

SUPER: Database
Data analysis
Uncover new business opportunities
Detect potential fraud or non-compliant behaviour
Optimise sales processes

Lung: Wow! AI seems incredibly powerful!

Dr. Albert Lam: The computing power of AI is indeed limitless
However, even the most talented players
require coaches to guide them
And we, as Data Scientists, serve as the coaches for AI

Lung: Wow! Being an AI coach sounds really cool!
So, what can I do?

Dr. Albert Lam: Since you are an intern here
let's try being an AI coach!

Voice-over: Finally, here comes the first challenge
Level 1: Team Up with AI

SUPER: Level 1: Team up with AI

Lung: Don't worry, leave it to me!

Dr. Albert Lam: This is the AI you'll be training up

Lung: May I ask what's its name?

Dr. Albert Lam: Well, we rarely give AI personal names
Most of them are referred to as 1.0, 2.0, and so on

Lung: Hmm...
Can I call it Samantha?

Dr. Albert Lam: Okay! The speech recognition level of Samantha
is already quite accurate
We just need to fine-tune
and integrate her into the world of banking
In the first challenge, you'll help this AI to ...

Lung: Samantha it is!

Dr. Albert Lam: Yes
you'll help Samantha to master
the common terminology used in the banking industry
Let's warm up first, okay?

Lung: Okay!
Waive credit card's annual fee...
Annual Fee, Waive

SUPER: I would like to waive the annual fee for my credit card
Annual Fee, Waive

Lung: What are the current interest rates...
Time Deposit

SUPER: What are the current interest rates for time deposit?
Time Deposit

Lung: Forgot the password...
Reset Password

SUPER: I forgot my password. Can I reset it here?
Reset Password

Lung: Don't worry, Samantha
Well, I've taught you this time
so you'll recognise it next time

AI: Thank you so much.
It's a pleasure working with you, Man Lung!

Dr. Albert Lam: Good job!
Warm-up is over, it's time to get on the field!

Lung: Yes!

Dr. Albert Lam: It's time to kick start
One of AI's main tasks is to
detect potential illegal financial activities

Lung: That happens to be my strength

Dr. Albert Lam: The next step is to give a command to instruct Samantha
to conduct an in-depth data analysis
Try to identify any potential fraudulent activities

Lung: Okay!

Voice-over: Level 2: Defend with AI
Be serious, Lung

Super: Level 2: Defend with AI

Lung: How can we spot potential fraudulent activities?
Samantha...

AI: Fraud? I don't engage in it

Lung: Samantha ?

AI: I have found the following information
about potential fraudulent activities

Lung: These files may relate to criminals
using false identification documents to open accounts
or recruiting proxies to open mule bank accounts
and later selling them to criminals for illegal transactions
Let's ask Samantha to conduct a deeper analysis!

SUPER: Username
Chan Tai Man
Password

Alert!

Dr. Albert Lam: Good try!
Knowing how to train up Samantha
and enhancing her capabilities
is an important step in progressing to be a Data Scientist
However, just playing defensively is not enough!

Lung: So, are we going on the offensive?

Dr. Albert Lam: Exactly
Data Scientists and AI
should not only offer assistance to banks
but also help them discover opportunities to score goals!

Lung: How should we do that, Coach?

Dr. Albert Lam: Data Scientists need to enhance their sense of data!
I can't say too much as your mentor
but I can sum it up in one word: Frequency!

Lung: Hey!
Hey!
Hey! Hey! That is, how to do it?
Frequency?

Voice-over: Level 3: Attack with AI

SUPER: Level 3: Attack with AI

Lung: Samantha?

AI: I have found the following files about Frequency

Lung: FAQs ?
The most frequently asked questions by customers recently?
Samantha, help me to check which keywords
are more popular recently?

Dr. Albert Lam: You need to be quick, Lung
The market is like a field
if you don't make a move
someone else will take the opportunity!

Lung: I know! Samantha, can you find anything?

AI: There's a popular keyword recently
"Green Finance"

SUPER: Green Finance

Lung: That's it!
Report the data to the bank immediately!

Dr. Albert Lam: Go for it!

Lung: Goal!

SUPER: Mission Completed

Lung: It's green finance
Many customers have been asking
about green finance products lately
Let's tell the bank to consider
launching more related products right away!

Dr. Albert Lam: Well done!
The job of a Data Scientist is
to understand the meaning behind the data
extract valuable insights for analysis and in-depth research
within a large and complex dataset

You have the potential to be a Data Scientist!

SUPER: The meaning of the data

Lung: I never imagine the work of a Data Scientist
is so exciting
But what are the prospects for such an interesting job?

Dr. Albert Lam: Data Scientists play a wide range of roles
in the financial industry
Developing digital assets!
Managing client wealth!
Detecting potential fraud!
Enhancing business efficiency!
Strengthening regulatory standard!
From start-up companies to large corporations
there is a huge demand for talents in this field
Just like AI
there's no position that can't be played

Lung: Should I change my career?
Coach! I want to be a Data Scientist!

SUPER: Data Science

Dr. Albert Lam: Data Science is a multi-disciplinary profession
combining computer science, statistics, mathematics
software development, machine learning, and more
Its applications are incredibly diverse
and the demand for data science talents
spans across almost all industries

SUPER: Computer Science
Statistics
Mathematics
Software Development
Machine Learning

Dr. Albert Lam: The financial industry, in particular
heavily relies on vast amounts of data
including transaction data, risk data
as well as calculating the risks for customer loan
Therefore, there is a huge demand for
skilled Data Science professionals in this industry

SUPER: Transaction Data
Risk data

Lung: In the past, computer science might seem to be a monotonous subject
However, with the emergence of Big Data advancements in AI, machine learning and other cutting-edge technologies the field of data analysis has transformed into a captivating and highly diverse discipline
Data Scientists are playing an increasingly crucial role
As data integration permeates every aspect of life new fields and opportunities emerge
For someone like you who enjoys analysis and thinks cognitively consider joining the field of Data Science!

SUPER: Data Science
The Secrets of Speech: AI-Powered Data Decoding

Special thanks


