
zühlke
empowering ideas

How to build Cloud, Data & AI skills in your teams

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About Zühlke



- **Austria**
  Vienna
- **Bulgaria**
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- **Germany**
  Frankfurt
  Hamburg
  Hannover
  Munich
  Stuttgart
- **Hong Kong**
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- **Portugal**
  Porto
- **Serbia**
  Belgrade
- **Singapore**
  Singapore
- **Switzerland**
  Bern
  Zurich
- **United Kingdom**
  Edinburgh
  London
  Manchester
- **Vietnam**
  Ho Chi Minh City

Founded in **1968**

17 offices in **10 countries**

2,000 employees worldwide

The Zühlke Group is **partner owned**

Certifications: ISO 9001, ISO 13485, ISO 27001

We put **data** at the heart of everything we do

Sustainability focus: climate action and health improvement

Our cloud partnerships

Advanced Specialized

Microsoft Partner

Microsoft

Microsoft Partner

Gold DevOps
Gold Data Analytics
Gold Application Development
Gold Cloud Platform

D2E
Data Driven Everything



aws

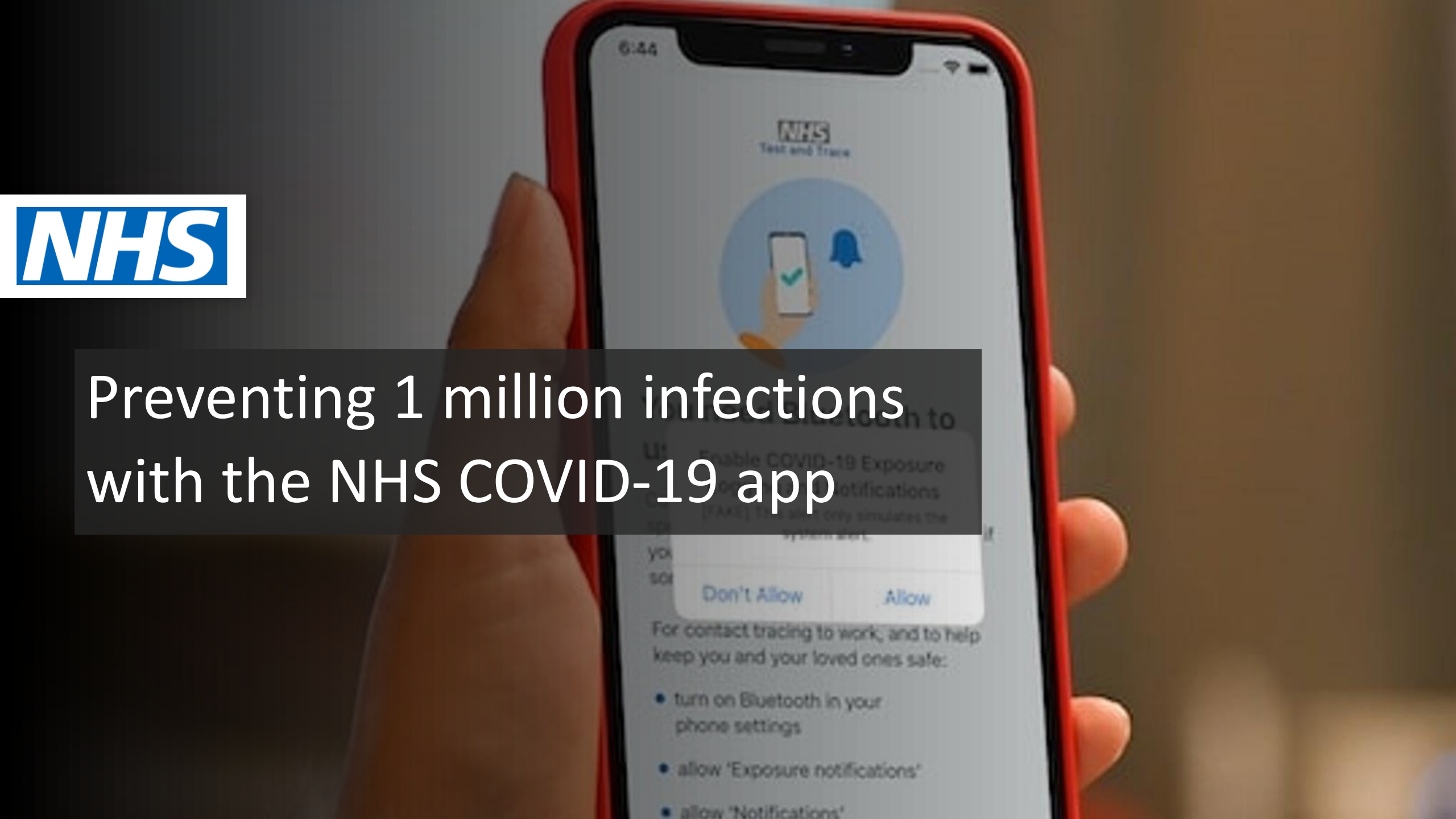
aws PARTNER Public Sector

aws PARTNER Advanced Tier Services

aws PARTNER AWS IoT Core Delivery

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Fielding, Iain



Preventing 1 million infections with the NHS COVID-19 app

Preventing 1 million infections the NHS COVID-19 app

Zühlke designed and developed UK's COVID-19 app and supporting infrastructure in just 12 weeks.



- NHS COVID-19 app prevents 1 million infections, 44,000 hospitalisations, and 9,600 deaths.

- The Challenge

- As the world entered the COVID-19 lockdown, pressure mounted to accelerate MedTech innovation and find a way to reduce the rate of infection and protect lives. In these challenging conditions, the DHSC and its executive agency, UKHSA (previously PHE), urgently needed to help contain the spread of the virus, prevent infection, and alleviate pressure on the NHS with a medically-approved contact tracing smartphone app. The test and trace solution needed to be designed, built, tested, approved, and launched within 12 weeks. Plus, it had to support six critical features.

- The Solution

- Together with the DHSC, we established a multi-disciplinary working group, which included policymakers, researchers, designers, engineers, as well as experts in security, ethics, accessibility.
- Despite the challenging conditions, we designed, developed, user tested, and launched the beta app in just six weeks. The app included all six mandated features and Class 1 'medical device' classification from the Medicines and Healthcare Products Regulatory Agency (MHRA).

- The Results

- Together with the DHSC and our ecosystem partners, we designed and delivered a medically-approved mobile app with scalable supporting infrastructure in record time.
- The app was downloaded by more than 22 million people and analysis from the leading science journal, Nature, estimated that the COVID-19 app helped prevent 1 million infections during its first year. This equates to preventing to 44,000 hospitalisations and almost 10,000 deaths.



Helping a surgical robot gain vision

Helping a surgical robot gain vision

Zühlke provided support with machine learning, device approval, and software development.



- The Challenge

- CARLO is a surgical robot designed by the Swiss company Advanced Osteotomy Tools (AOT). It uses a non-contact cold laser ablation procedure to cut bone and is set to revolutionise osteotomy surgery. For the technique to succeed, CARLO needed to develop machine-learning based vision: it had to learn to see.
- Besides empowering CARLO with vision, AOT faced another challenge – seeking FDA approval to market the device in the US.
- So, Zühlke supported AOT with experts in machine learning, data engineering, software development, and regulatory requirements.

- The Solution

- Together, our team and AOT developed a medical machine learning process. Building on it, the team then implemented and validated a legally compliant data platform for data collection and developing medical machine learning models.
- Finally, the joint team implemented an initial image recognition application, for which the new platform proved invaluable.
- This initial proof of concept involved enabling the robot to use optical coherence tomography to orient itself and precisely locate the bone and cutting sites – it gave CARLO vision.

- The Results

- For AOT, this collaboration was a major milestone on the path to commercialisation.
- Working with us had other benefits. Now, the legally compliant data platform accelerates AOT's ability to develop further medical software applications for a wide range of indications.
- The data platform also facilitates the FDA approval process. This is good news, not just for AOT, but for all the patients who will benefit from new and improved therapies enabled by the device.

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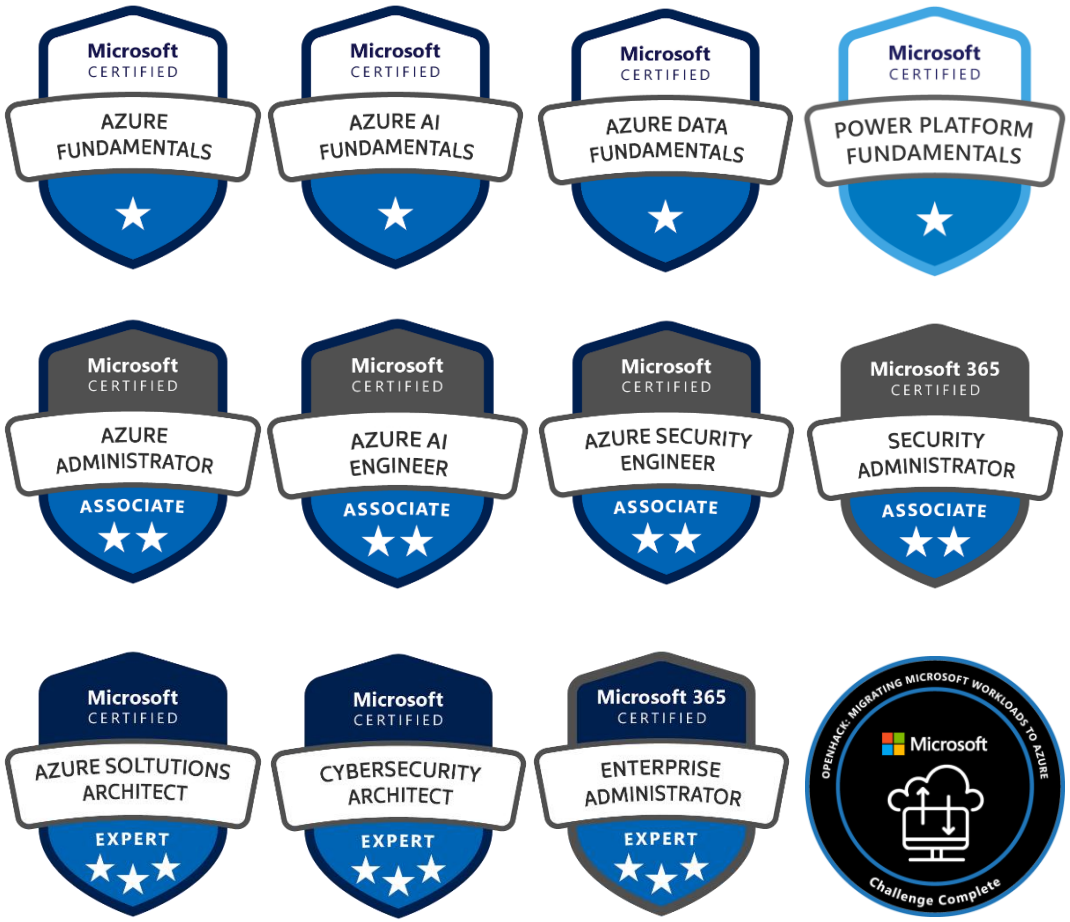
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Iain Fielding

Principal Cloud Architect (Azure)





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Learning lessons

01

Learning about cloud isn’t just for technology teams, Business teams get a lot of value from learning too

02

All the big 3 cloud providers have free or low cost training out there.

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Credentials

- Learners are more confident in their abilities.
- Can all be done online.
- Credentialed employees produce higher quality work and are more productive.







82%

Of learners gained confidence in their abilities.

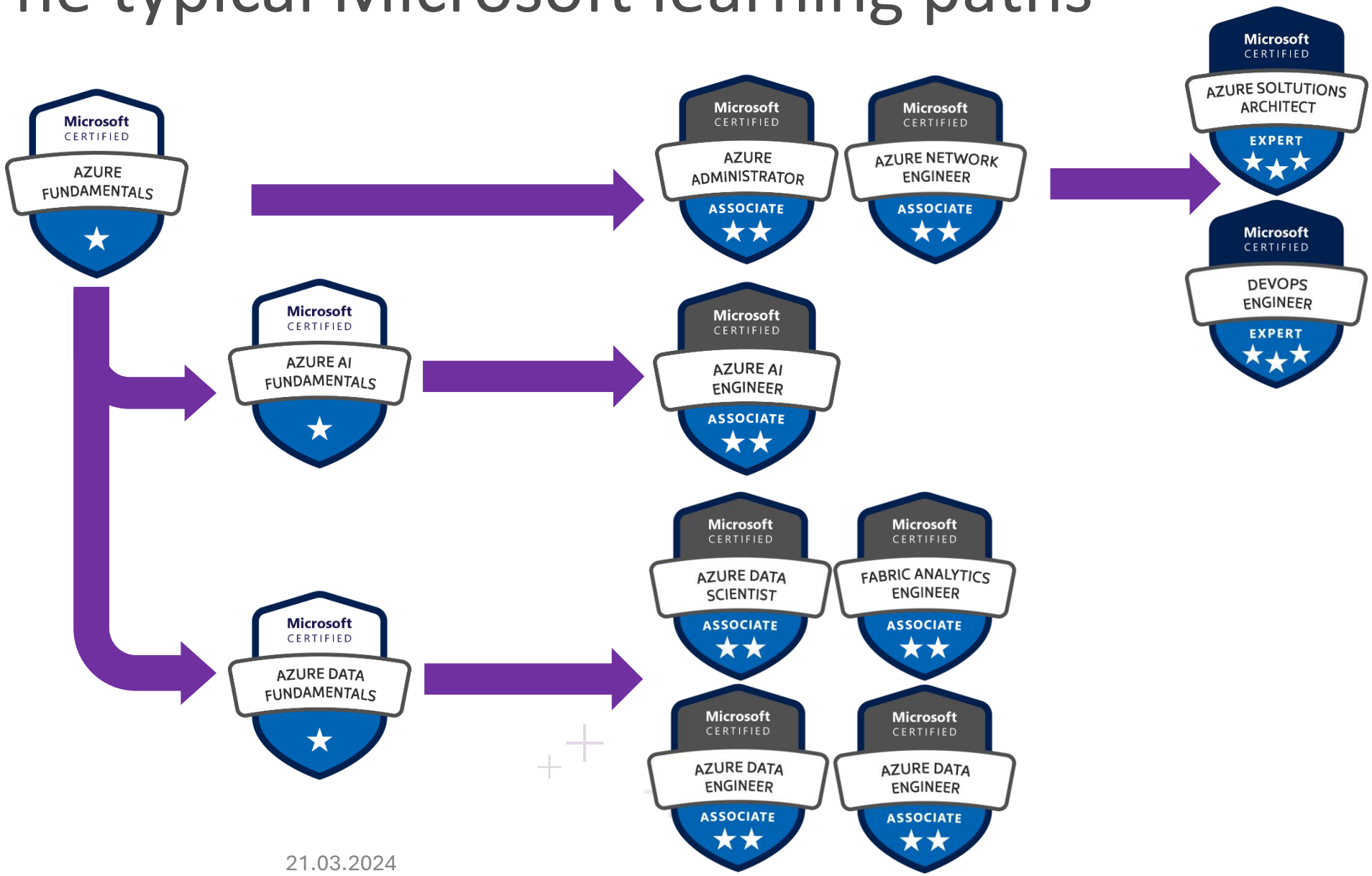
Microsoft Certification types



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The typical Microsoft learning paths

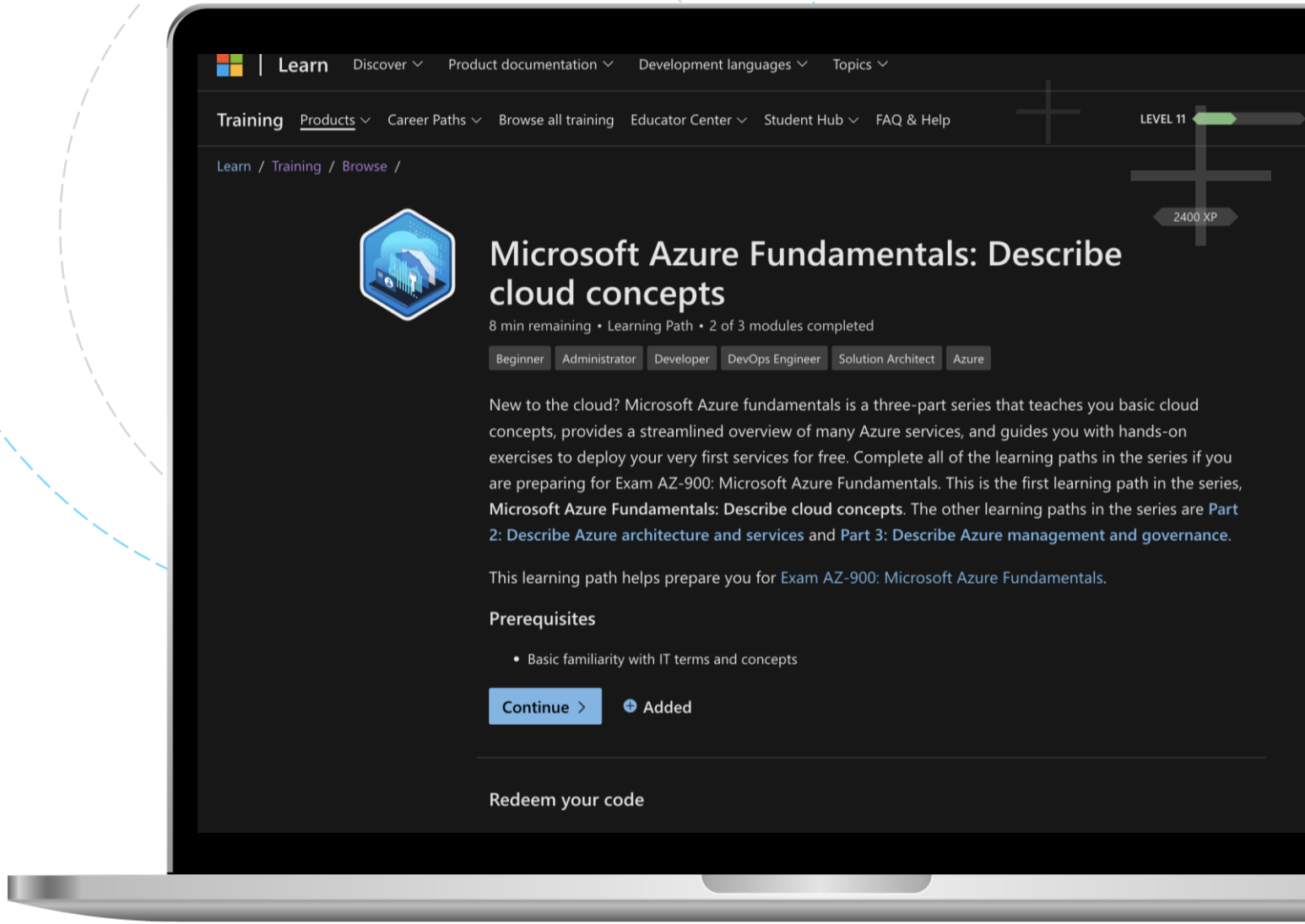


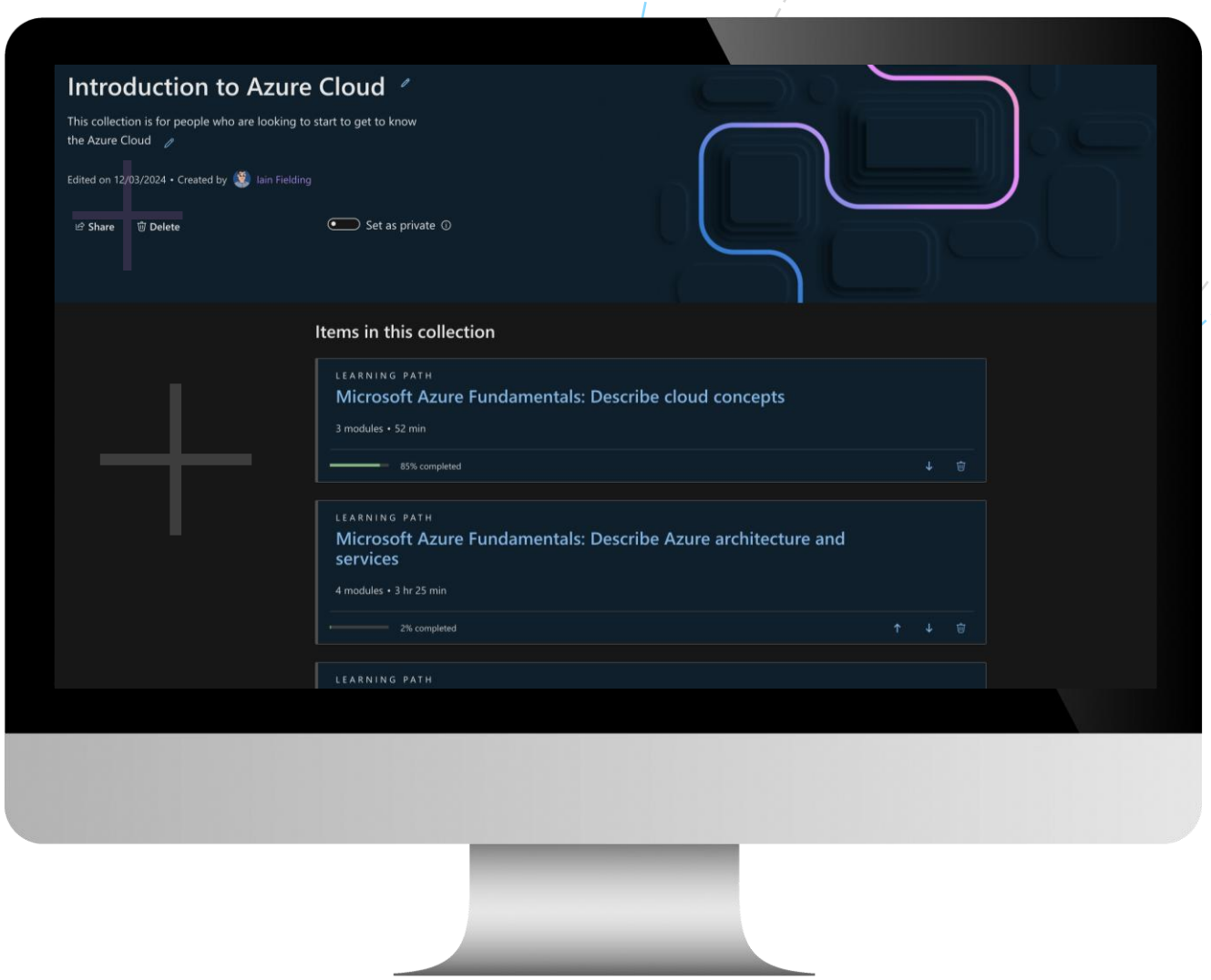
Microsoft Learn

Free and Open training platform that helps you learn about Microsoft products.

Videos / guides / pictures

Step by Step journey of learning.





Modules and Collections

Group together modules or pages

Include exams

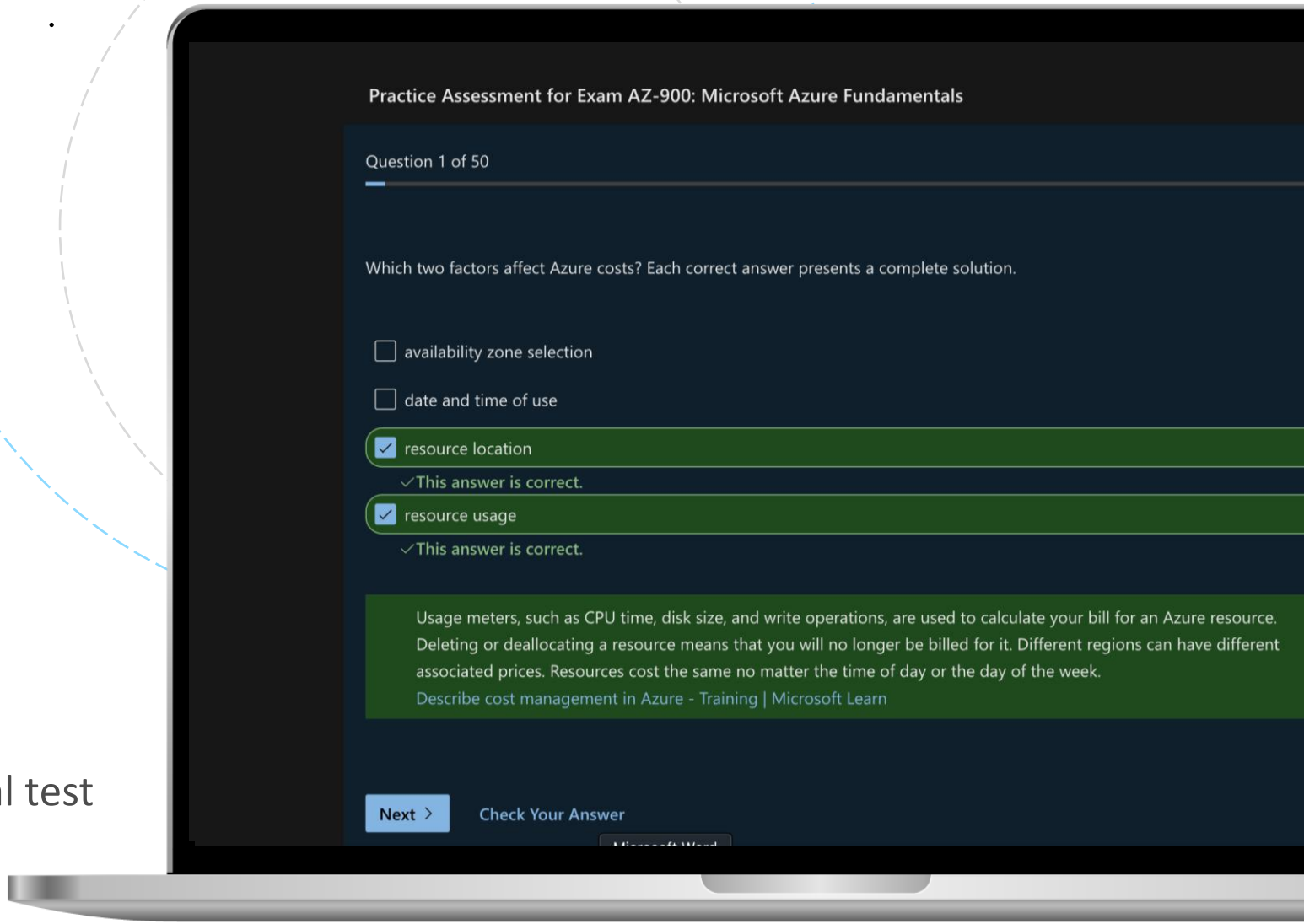
Any page on Microsoft Learn

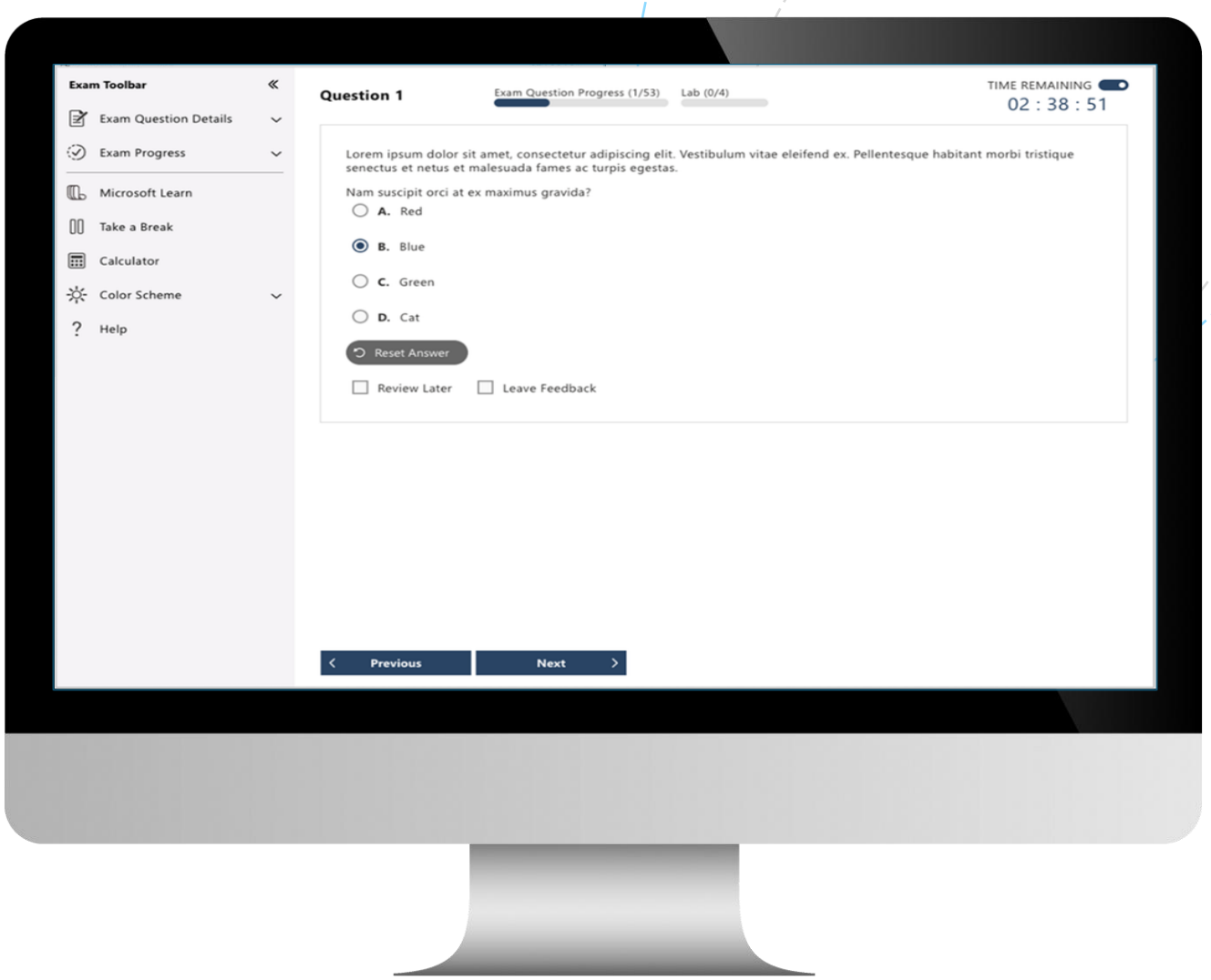
Share with colleagues

Practice Tests

Just under the Schedule exam

- 50 Questions
- Take as many times as you like
- Advice on every question
- 3 times over 80% go book your actual test





The Exam

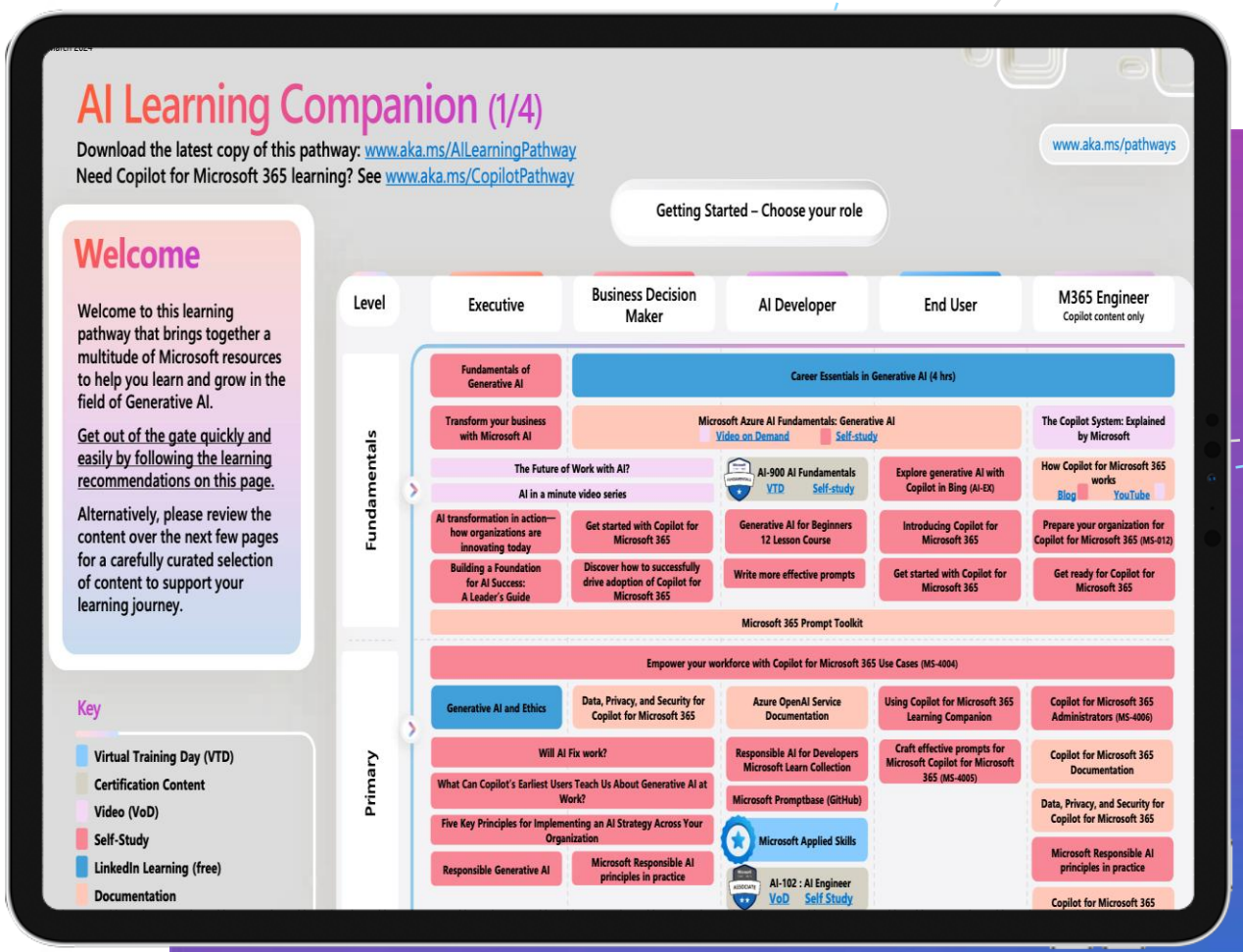
- New UI from March 2024
- https://mscertdemo.starttest.com/
- Online or at Test Center
- Can hide time
- Results immediately

The UK Learning community always amazes!



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Learning community resources

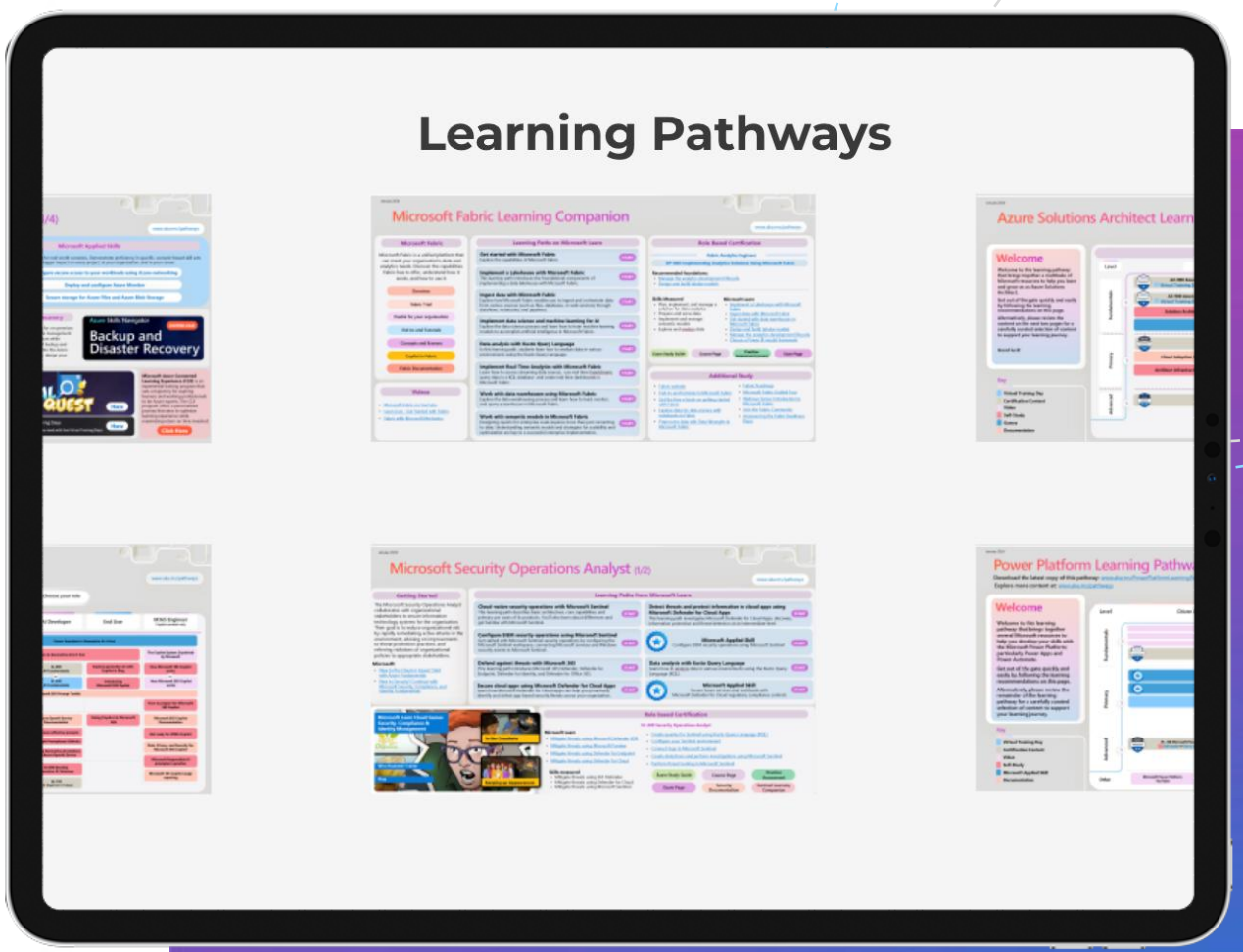


AI Learning Companion

www.aka.ms/AILearningPathway

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Learning community resources



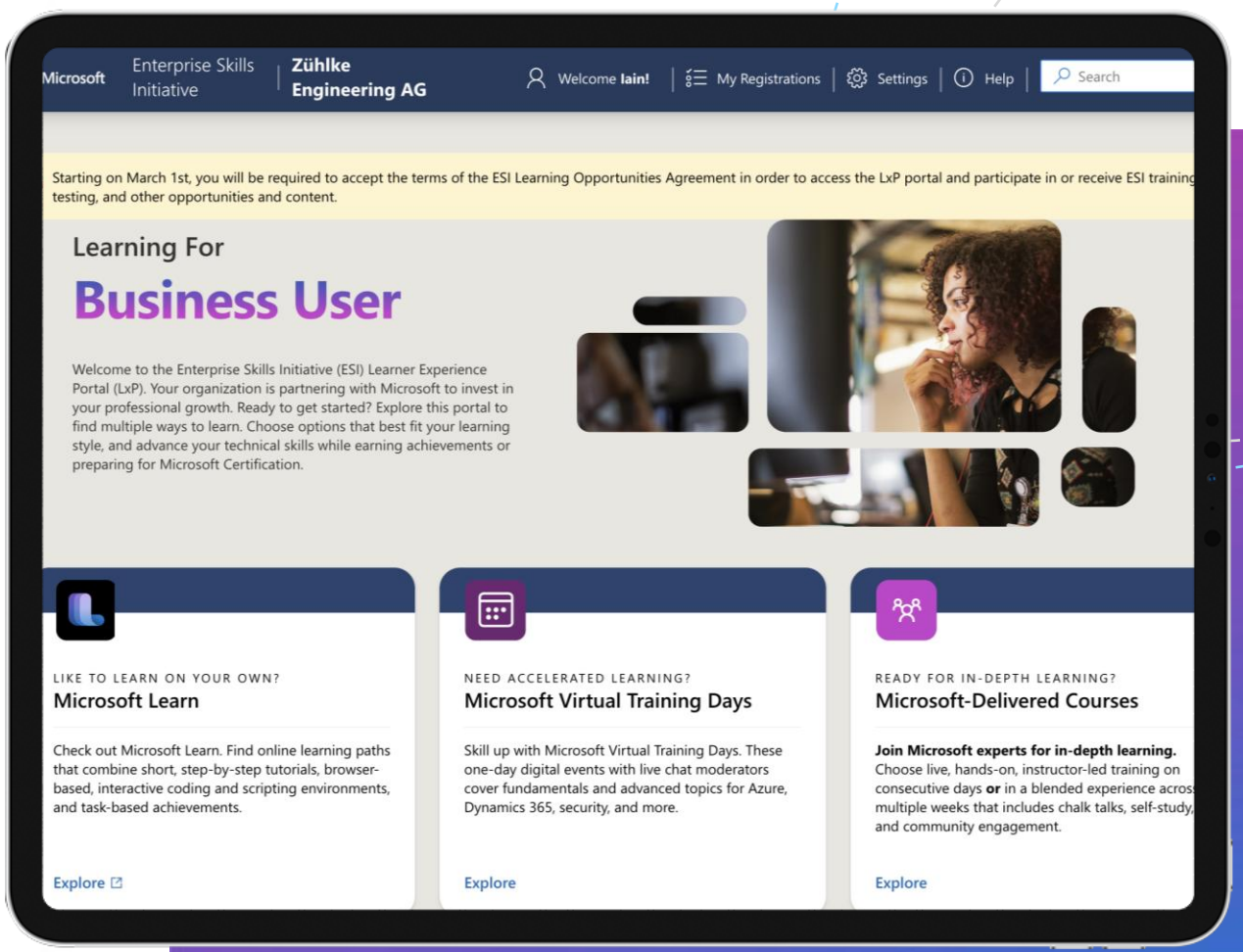
Paul Griffiths

Public Sector Skills Lead

www.aka.ms/pathways

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Enterprise Skills Initiative



Discounted exam fees

Teams training Days

Microsoft Delivered Courses

https://esi.microsoft.com

subject to availability

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Zühlke Academy

Course topics overview

Lean & Agile Organisations



Scrum
Kanban
Scaled Agility / SAFe

Cloud



Cloud Enablement Program
Container Fundamentals
Get started with Kubernetes
Kafka Streaming Technology

Cybersecurity



Threat Modeling for Engineers
Web Security

Data & AI



Data-driven Companies for Executives
Generative AI for Business
Medical AI

Digital Experience



Hands-on Introduction to the Metaverse
Medical UX
Requirements Engineering
User Experience Design

Software Excellence



Clean Code (Java + .NET)
Spring Fundamentals
Writing Good Tests with Junit

Device Engineering & Innovation



Design for Sustainability
Hands-on Product Innovation
Clean Code (C++)
Requirements Engineering

DevOps



SAFe DevOps
SAFe for Architects
Quality Assurance

Fielding, Iain



Come see us!

You'll find us here at stand 11.





Advanced Specialized

Microsoft Partner

Microsoft

Microsoft Partner

Gold DevOps
Gold Data Analytics
Gold Application Development
Gold Cloud Platform

Iain Fielding

Principal Cloud Architect - Azure

+44 (0) 7731 523867

Iain.fielding@zuhlke.com

linkedin.com/in/iainfielding/

@IainFielding