

# **Evidence Summary**

Skills shortages in the UK economy

2022



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# Introduction

Now more than ever before, the implications of Brexit, Covid-19, the need to reach net zero emissions, and the fourth industrial revolution are exacerbating the scale of skills shortages across the UK.

It is essential that researchers, policy makers and frontline teachers, tutors and careers leaders all have access to key information regarding the size and scale of skills shortages and the changing labour market.

There is a huge amount of excellent research in this space. The Edge Foundation convenes key organisations and researchers to produce a regular series of <u>Skills Shortage</u> <u>Bulletins</u> exploring the changing labour market and key sectors of the economy.

In this summary document, we draw out succinctly the key messages from across the series. We hope this helps to aggregate and amplify the messages we have been hearing on skills shortages in the UK, and the changing shape of our economy and labour market, so that you can use them in your work.



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To see the full series of Skills Shortages Bulletins please visit <a href="https://www.edge.co.uk/research/projects/skills-shortages-uk-economy/">www.edge.co.uk/research/projects/skills-shortages-uk-economy/</a>

#### Key message 1:

## Overall labour market changes

Looking to the future, while the scale of the economic impact of the Coronavirus pandemic is yet to be fully understood <u>Bulletin 8</u> and <u>Bulletin 9</u> highlighted that its impact on employment and the labour market has been profound, with the impacts unevenly spread:

- > Workers in lower-level occupations and with fewer qualifications are more vulnerable to unemployment. Young people, lower-paid workers and those previously on insecure contracts were very much at the sharp end of this change (with more than 40% of each group affected), as were those who previously worked in retail (over 50 and 70%, respectively). (Resolution Foundation, Bulletin 9).
- The number of older workers seeking unemployment related benefits doubled. This is particularly concerning given that older workers who lose their jobs are far more likely to slip into long-term worklessness. Data from the Resolution Foundation highlights that while 81% of 18-34-year-olds fully furloughed during the winter 2021 lockdown had come back to work by late May, only 65% of those aged 55 and older had done so. (Bulletin 9).
- > Young people face a double whammy of disrupted education and initial entry into a tough labour market.
- > A surge in unemployment, with those from lower-income families and without a degree-level qualification hardest hit.
- A third of Britons (34%) want to change careers, yet only 16% of respondents understand exactly how their skills would be useful in another career. Many Britons lack the confidence and know-how when it comes to recognising the potential of transferable skills as a route to changing careers. City & Guilds has launched 'Skills Bridges' to turn the tide on unemployment in the UK and help individuals who work in industries impacted by Covid-19 to switch careers (City and Guilds, Bulletin 9).
- > There are differences in job loss rates between different ethnic groups, with some Black, Asian and minority ethnic communities particularly vulnerable to increased debt and financial hardship.

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Learning and Work Institute

That is not to say that improvements are not forthcoming, and that some young people have not been able to return to work on better pay, better conditions, or in a new industry. Although we have seen the difficult reality of decreasing demand for some jobs, Covid-19 has resulted in a set of emerging professions reflecting the adoption of new technologies. There has been a greater demand from green economy and digital sectors in particular – for example increasing the call for roles such as Artificial Intelligence (AI) and machine learning specialists; digital transformation specialists; project managers; robotics engineers; machine repairers. We now need to see policies putting into a place a ladder that allows workers of all ages, the skills and capacity to learn, progress and retrain throughout their working lives.

This is building on and accelerating the changes that we have already begun to see as a result of the **fourth industrial revolution**, which has brought with it megatrends like automation, the use of robotics in manufacturing and the impact of big data and analytics across all industries.

Covid-19 has undoubtedly accelerated this, with recent data from the <u>World Economic</u> Forum (Bulletin 8) highlighting that over 80% of employers reported that automation has accelerated their work processes.

Meanwhile, AI is finding the broadest adoption among the Digital Information and Communications, Financial Services, Healthcare, and Transportation industries, while the Government and the Public Sector industry shows a distinct focus on encryption specifically.

As we look to the future, the picture is summarised by the acronym VUCA - volatility, uncertainty, complexity, and ambiguity.

World Economic Forum









#### Key message 2:

# Skills shortages are numerous and have grown significantly

The Department for Education's (DfE) latest <a href="Employer Skills Survey">Employer Skills Survey</a> (Bulletin 8) provides a vital pre-Covid-19 baseline. It set out insights into the long-running skills challenges employers have been facing at the tail end of a period of economic uncertainty, transformation, and disruption. It highlighted that nearly a quarter of all vacancies were skills shortage vacancies (which cannot be filled because the employer cannot find the skills they need), a further increase of 2 percentage points since 2017. Of most concern, nearly three fifths of these shortages were reported in middle and high skilled roles.

The UK skills mismatch was also reinforced by the <u>Industrial Strategy Council's</u> report (Bulletin 7) which highlighted that by **2030**, **7 million additional workers** could be under-skilled for their job requirements - this would currently constitute about 20% of the labour market.

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Industrial Strategy Council

Research from Lloyds Bank Group / IPSOS MORI (Bulletin 8) illuminated that digital skills are of particularly acute shortage, emphasising that around 11.7 million people aged 15+ across the UK lack the 'essential digital skills' needed for day-to-day life online. While this remains the case, the Bulletin also highlighted how the Covid-19 pandemic necessitated the fast tracking of digital skills, with one in three (33%) having boosted digital skills during lockdown.

Meanwhile, research from the <u>Skills Network</u> (Bulletin 8) indicated that **COVID-19** has resulted in a shift in the types of skills that employers are seeking – finding that the skills most in demand are auditing and accounting skills (60% of Chief Finance Officers say there is a shortage of financial skills in the UK), followed by nursing (more than 50,000 nursing vacancies in the UK).

...11.7 million people aged 15+ across the UK lack the 'essential digital skills' needed for day-to-day life online...

Lloyds Bank Group / IPSOS MORI

#### Key message 3:

# The rate of skills investment is in decline

Surveys and analyses have repeatedly suggested that employer and public investment in training for existing workers is low and falling.

Findings from the <u>Learning and Work Institute</u> (Bulletin 8) found that **Government** spending on adult learning in England declined by 47% in the decade from 2009-10 to 2018-19, and that employers spend comparably less in this area than their international counterparts.

Meanwhile, the <u>DfE Employer Skills Survey</u> (Bulletin 8) highlighted that **fewer** employers had arranged or funded training (61%) for staff in the last 12 months in 2019 - the lowest proportion since 2011, and that the total number of training days has reduced by 9m since 2015 (a fall of 8.3%). The Survey also revealed that training reached a smaller share of people overall (i.e. 60% in 2019 compared to 62% in 2017) which is the lowest proportion reported since 2011 (54%). This means a higher proportion of people are missing out.

It is important to note the **difference between Small and Medium sized Enterprises (SMEs) and large organisations. CBI** (Bulletin 8) highlighted that SMEs face more barriers, such as a lack of scale, high fixed costs of training and lack of capacity, preventing them from increasing investment in training.

Interestingly. Lloyds Bank / IPSOS MORI (Bulletin 8) revealed that the pandemic lockdown has resulted in an increase in self-directed learning, with one in three (35%) having taken action and boosted their digital skills, with almost a third (31%) reporting they have up-skilled for work reasons. Over half of these learners (57%) are self-taught, with a quarter (25%) calling upon family members for support and one in five (21%) relying on friends.

A key question therefore is how in future to incentivise 'shared responsibility' and coinvestment in skills from the state, employers, educational institutions, and individuals, to drive the kind of lifelong learning revolution necessary to support future economic success and social prosperity for all.

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Lloyds Bank Group / IPSOS MORI

#### Key message 4:

# Skills shortages have a significant cost for UK businesses

Disruption caused by the pandemic has seen the number of available job candidates grow, yet employers still struggled during the past year to find suitably skilled workers. This was re-enforced in the latest <a href="Open University">Open University</a> Business Barometer which highlighted that 61% of organisations currently believe they have a skills shortage in their organisation.

As a result, there has been an increase in the amount spent by businesses to find, secure and develop talent, with employers **spending out on recruitment fees**, **increased salaries**, **temporary staff**, **and training** to upskill those hired at a lower level to a **total tune of £6.1 billion** per year.

Disruption caused by the pandemic has seen the number of available job candidates grow, yet employers still struggled during the past year to find suitably skilled workers.

Open University' Business Barometer

#### Key message 5:

# The skills employers are seeking are overwhelmingly technical and transferable

Of all the messages from the research captured in this series of bulletins, this is probably the most often repeated and reinforced. In our very first article, the DfE's <a href="Employer Perspectives Survey">Employer</a> (Bulletin 1) showed that almost two thirds (65%) of employers rated relevant work experience as significant or critical when hiring, compared to less than half (46%) for academic qualifications.

This was reinforced by CBI/Pearson's <u>Educating for the Modern World</u> (Bulletin 3), which showed that over half of employers (60%) value broader skills such as problem solving and nearly three quarters (75%) say they prefer a mix of academic and technical qualifications or that they view all qualifications equally.

The post-Covid-19 skills landscape looks particularly interesting as the latest data from the Skills Network (Bulletin 8) showed that the top 5 skills sought by employers in the UK are: Auditing; Nursing; Accounting; Business Development and an understanding of Key Performance Indicators. Research also found that technical skills such as programming, coding, and software development are in extremely high demand, with technological roles growing by 7.3% each year. This accords with the findings of other research suggesting that both 'high-tech' and 'high-touch' roles are experiencing significant demand.

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Skills Network

In addition to 'technical skills', the same report also analysed those 'soft skills' most required by employers and found that the ability to display **soft skills like management**, **leadership and planning** is crucial for candidates. This supports findings across our previous Bulletins, where **LinkedIn's Global Talent Trends 2019** (Bulletin 5) found that **92% of employers said that so-called 'soft skills' are equally or more important than hard skills**, with creativity highlighted as being of particular value. There is work to be done to help young people understand the skills that employers are looking for - currently only 33% of young people thought they understood the skills employers are looking for, and 57.5% believe they have some idea (**Youth Census**, Bulletin 9).

Edge's partners at <u>Skills Builder Partnership</u> have an excellent model summarising these key skills and how young people can develop them:

















#### Key message 6:

# The skills employers are seeking are not being prioritised within the education system

Several pieces of research featured in the bulletins have highlighted that, despite the clear evidence from employers, the skills and attributes above are, in some cases, being actively deprioritised by current education policy.

Indeed, the <u>OECD</u> (Bulletin 8) has said that one of the biggest risks to national education systems today is that **traditional ways of educating are losing currency and relevance** and are not adapting quickly enough to the needs of a dynamic economy.

We highlighted in research from <u>JCQ</u> (Bulletin 3) that between 2010 and 2018, with the introduction of the EBacc, there was a fall of 154,000 (57%) in entries to Design and Technology GCSEs and a reduction of 77,000 (20%) in entries into creative subjects. In computer-based subjects, there was a fall between 2016 and 2018 of 17,000 entries. These are subjects that support the development of key skills and competencies that employers seek, such as creativity, team working and digital skills.

Edge and Education & Employers' <u>Joint Dialogue</u> (Bulletin 4) highlighted that teachers feel recent qualification reforms are negatively impacting their ability to teach the skills that employers are looking for. Nearly half (47%) of teachers surveyed believed that they have fewer opportunities to develop employability skills since the introduction of reformed GCSEs and A-Levels in 2014, a third stating that the new syllabus required a focus on rote learning, leaving less space for developing creativity.

Latest figures from Youth Employment UK's latest <u>Youth Voice Census</u> 2021 (Bulletin 9) highlight that 65% of young people believing it was 'Important' or 'Very Important' to take part in social action and extracurricular activities. Such activities can support the development of these transferable skills sought by employers.

However, the census revealed a decrease in careers support, work experience and in the extracurricular activities this year.

In terms of work experience, young people do not believe employers have good quality opportunities for them – only 9.9% of young people feel confident that they will be able to access quality work where they live.

Careers activities have also decreased in schools this year. 'Face to face' careers sessions were received by only 42.1% of young people. 43% of those in college had access to a careers advisor. Access to careers support has plummeted across universities this year, with half of students not accessing any support.

For Asian or Asian British respondents to the 2021 Youth Voice Census 'lack of work experience', 'anxiety' and 'having no contacts' were the top reported barriers to gaining work. For Black, African, Black British or Caribbean respondents, the top reported barriers were 'lack of work experience', 'having no contacts' and 'racial discrimination'.

Extra support will be needed for those transitioning from education and training to ensure they are supported in their next steps. We must also ensure that policies support those from underrepresented groups.

Although academic qualifications are still discussed with students more frequently than vocational qualifications, we are seeing a positive change in the number of young people hearing about apprenticeship opportunities in school. 85.8% of young people had apprenticeships discussed with them. Building on this, 84.7% of current apprentices rated their apprenticeship as 'Good' or 'Excellent' overall.

However other vocational options are still discussed less with young people, with Traineeships (65.6%) and T Levels (72.7%) never discussed. (Youth Census, Bulletin 9).

Above all, young people's final call in the Youth Voice Census 2021 was that they wanted their contributions to mean something. Sadly, 81.9% of young people do not think there are enough opportunities to share their views on important issues currently (Bulletin g).

The case studies highlighted throughout the bulletins show that despite wider policy, some schools, colleges, and universities are focusing very explicitly on developing the skills employers are asking for. Cardiff University's National Software Academy (Bulletin 2), the Edge Hotel School (Bulletin 3) and Ada the national college for digital skills (Bulletin 8) all provide robust examples of integrating rich employer engagement and workplace experience to prepare students for the world of work.

#### Key message 7:

# Employer confidence in the future ability to meet skills requirements is low

Skills that were in short supply pre-pandemic have become all the more highly sought after since lockdown. Digital skills in particular have become even more desirable as organisations shift their working models online, and remain in high demand, as referenced in the <u>Lloyds Bank Group / IPSOS MORI and Tech Nation</u> reports (Bulletin 8).

...11.7 million people aged 15+ across the UK lack the 'essential digital skills' needed for day-to-day life online.

Lloyds Bank Group / IPSOS MORI

Meanwhile, the <u>Industrial Strategy Council</u> (Bulletin 7) pointed to more severe **skills shortages in 'workplace skills'** with at least 2.1 million workers likely to be acutely underskilled in at least one core management area (leadership, decision-making or advanced communication) and 1.5 million likely to be acutely under-skilled in at least one STEM workplace requirement.

This suggests that more significant changes are required in the education system to meet the needs of employers. The case for change in assessment as one way to drive these changes is set out clearly by the <u>Rethinking Assessment movement</u> that Edge has helped to found.

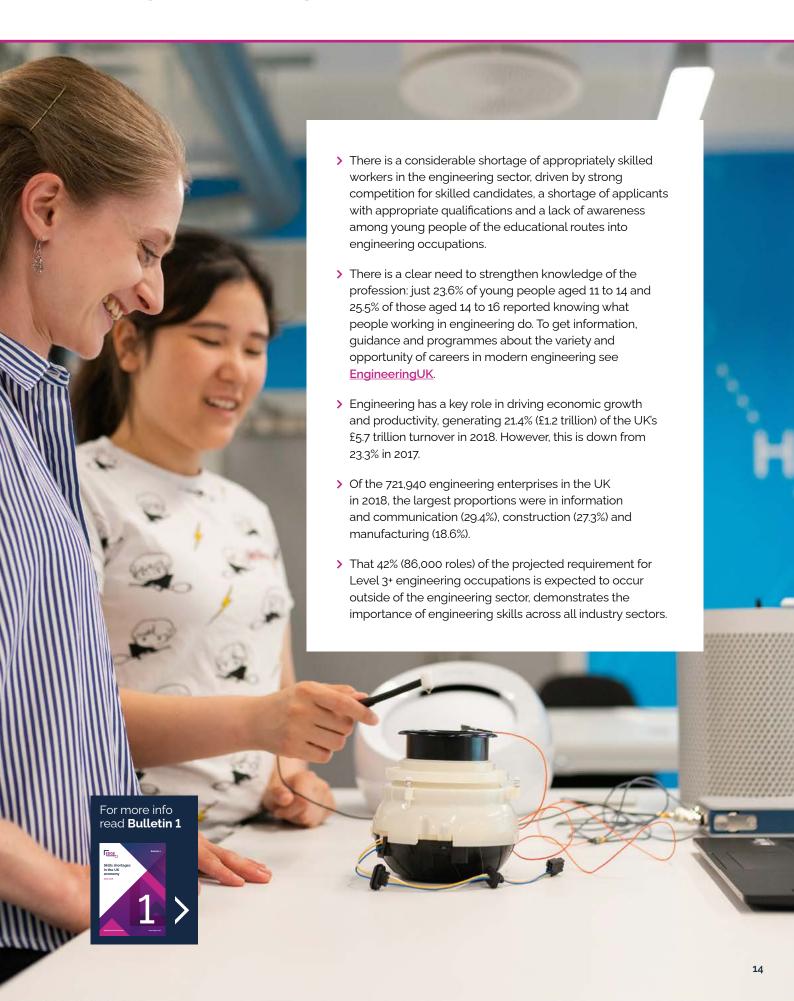
...more severe skills shortages in 'workplace skills' with at least 2.1 million workers likely to be acutely under-skilled in at least one core management area...

Industrial Strategy Council

# Sector summaries

As we have seen, there is a diverse picture of skills shortages and changes across different sectors of the economy. Here we highlight key messages featured in the Bulletins by sector.

## **Engineering**

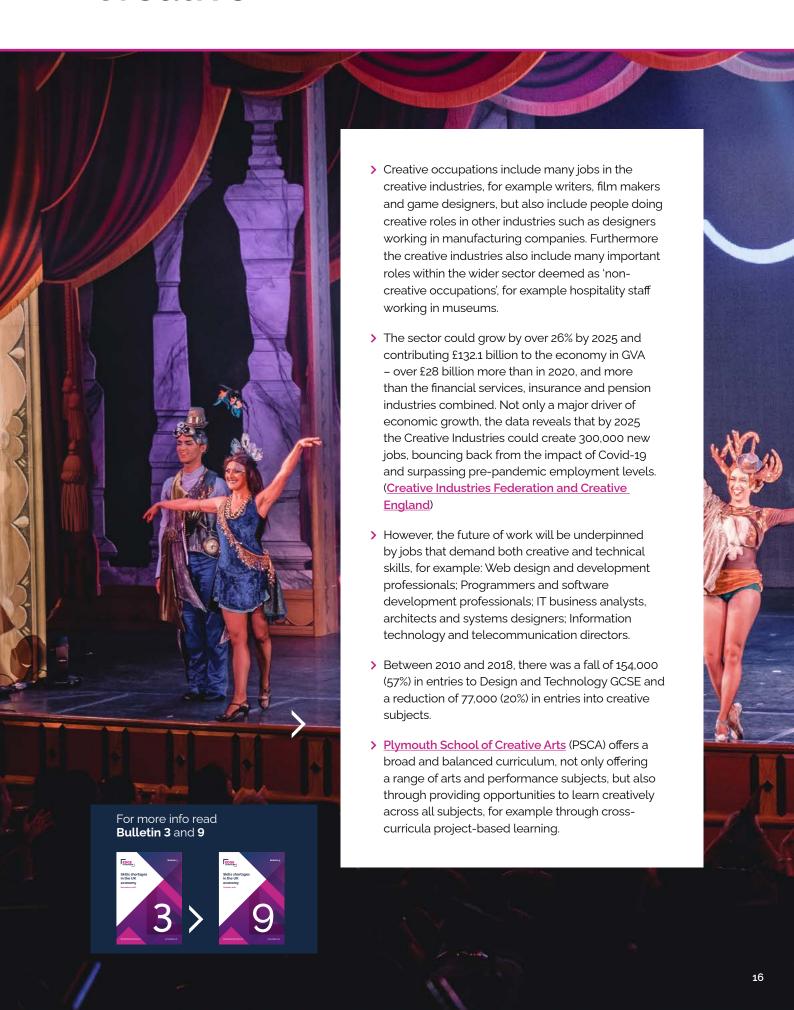


## **Digital**

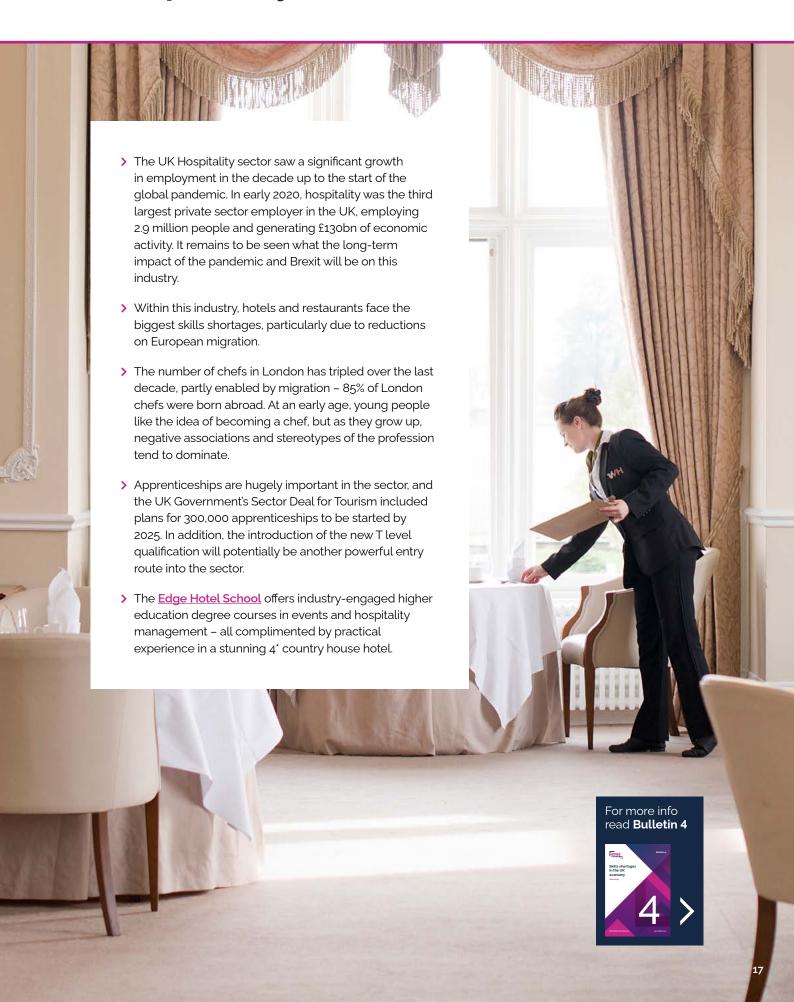
- > In 2020, UK tech employment had grown by 40% over the last 2 years, accounting for 9% of the national workforce with 2.93m jobs created.
- > Tech Nation shows that there have been rapid recent increases in demand for roles resulting from Covid-19; from June to August 2020 digital tech saw a 36% increase in vacancies. Of all roles advertised, Cambridge and Belfast had the highest proportion of digital tech roles at 26%.
- In 2018, there were over 130,000 software developer vacancies - the most in-demand tech position across all clusters in the UK. This was still true in 2020, the most advertised digital tech role across the UK cities was Software Developer (6 per cent of all advertised digital tech roles).
- > Over the past 3 years, demand for roles containing AI, cyber and cloud skills have all increased. We observe the larger increase from 2018-2019, particularly with the likes of AI. AI and cyber grew by 44% and 22% respectively year on year.
- Data centres provide the core digital infrastructure that underpins our modern economy by transmitting, receiving, storing, processing, and managing digital data securely and efficiently. Data Centres require complex skills needs, from network design to air conditioning, from energy management to generator maintenance. In the UK, this sector cannot currently meet its skills needs with domestic talent.
- > Ada, the National College for Digital Skills offers a Sixth Form and higher level (level 4) and degree (level 6) apprenticeships for those who are passionate about tech. While <a href="OtFounders">OtFounders</a> is an innovative coding school which offers those wishing to reskill free education and a job guarantee. Their unique model is based on peer-to-peer and project-based learning. Both of these provide a pipeline of talent straight to the UK's tech industry, with a key focus on improving diversity and equality within the sector.
- Cardiff University's <u>National Software Academy</u> offers a BA in Applied Software Engineering. It works closely with industry, teaching with problem-based learning and real-world examples to ensure graduates are highly employable and meet the needs of local employers.



### Creative



## Hospitality



### **Health and Social Care**



## Construction



## Logistics



### Green





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