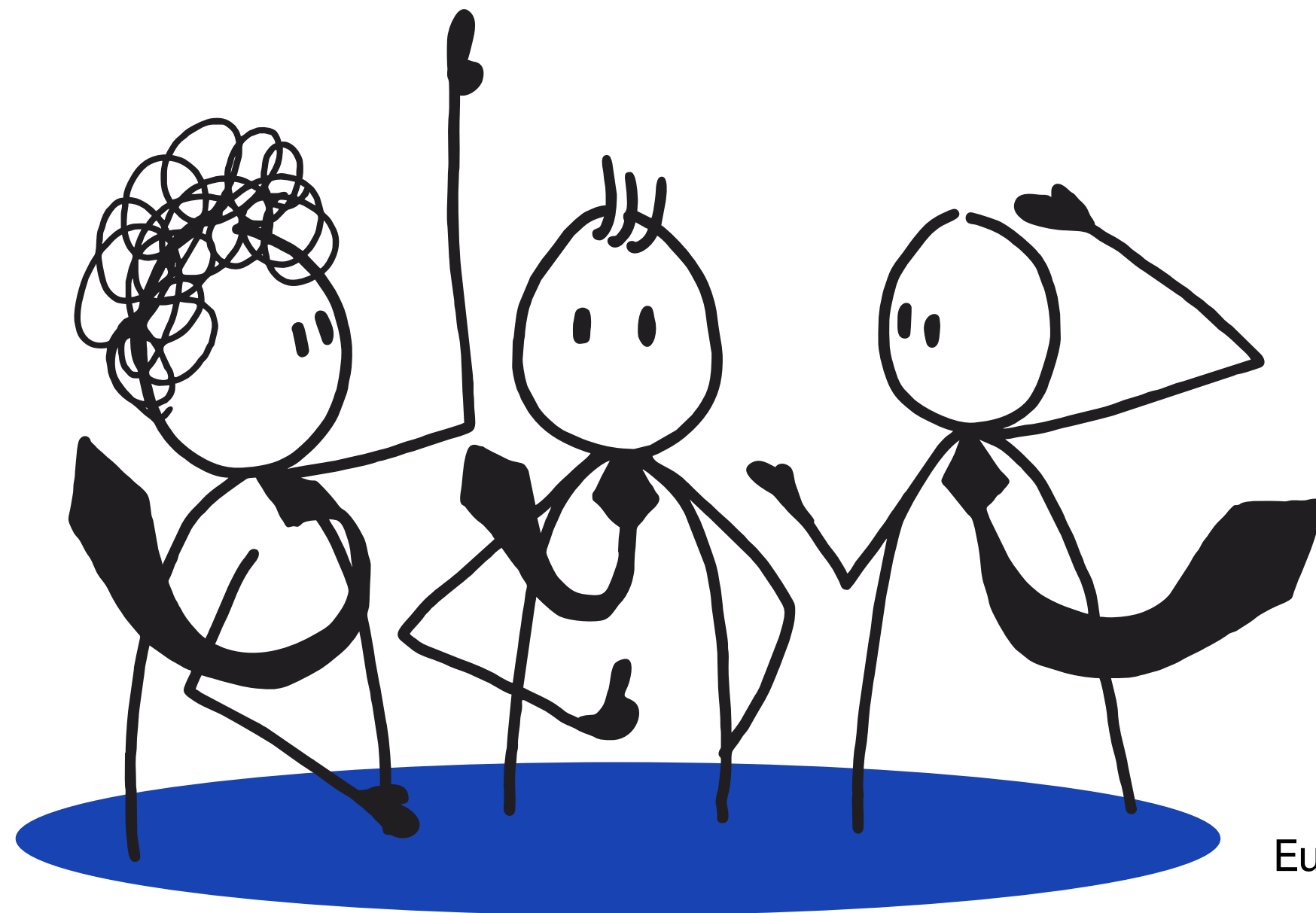


# Language is a superpower

**In the age of  
GenAI,  
languages  
are needed  
more than  
ever.**

---



---

Dr Emmanuelle Lacore-Martin  
Head of the Department of  
European Languages & Cultures  
University of Edinburgh

# Languages make Global Scotland connected and competitive.

- **Languages** open minds, perspectives and opportunities. In a world where 75% of people do not speak English, they enable real connections at home and abroad. Even basic skills can make a big difference.
- **Language learning** equips young Scots with strong linguistic, intercultural, and academic skills. It makes them effective communicators and mediators, valued as such by employers.
- **Language skills** are vital for global success, but post Brexit, many UK employers experience recruitment difficulties, leading to missed opportunities. Candidates with language skills stand out.





Language learning improves all-round literacy. It builds lifelong brain plasticity, problem-solving, empathy and creativity. Thinking in more than one language enhances reflective and analytical skills.

---



Languages train  
brains, open minds



**‘You have to speak at least two languages to know that you speak one.’**

Barbara Cassin,  
French Philosopher.




The development of Large Language Models (LLM) like ChatGPT gives language and literacy skills new relevance :

text-based GenAI  
prompted by text  
to give text-like responses –

---

LLM are also multilingual

and already transforming the way we work, teach, learn and seek insights.

*'Rather than having to learn to talk the language of technology and programming computers, effectively they're learning to talk*  
*our language.'*

Matt Candy, IBM AI chief, highlighting the renewed importance of languages and humanities for the training and use of LLM.

# Languages are our gateway to AI...



## 01. Better prompts, better AI

---

The quality of LLM output depends on the quality of the input. Precision and clarity are essential.

## 02. Critical reading skills – surviving skills

Literacy is key for skillful use of LLM, for prompting and for essential critical assessment of the output. Language graduates are especially well equipped for this - trained in advanced writing and critical reading skills.

## 03. Multilingual use boost

---

Cross-prompting - combining other languages with or without English - gives better results in multilingual LLM responses. And to train LLM as multilingual, and review data input as well as outputs, language skills are essential.

# ... and keep us in control.

- **GenAI presents significant risks** – for our autonomy, our ability to continue to think critically and **our capacity to direct machines rather than being led by them. Language and humanities degrees** equip future graduates with essential **protective skills.**
- **LLM is AI as text** – and the chance for the most skilled language users to **remain in control of the output** and to be able to access the **most insightful and valuable results**, in any professional context.
- **Language skills are essential to keep GenAI hallucinations in check;** to check machine-translation for accuracy and cultural relevance, to avoid bias. This is leading to **new jobs.**



➔ **Natural Language Processing Engineer**

Develop and improve AI systems that understand and generate human language.

➔ **AI Trainer**

Rate, correct and annotate data to ensure accuracy and cultural relevance.

➔ **Computational Linguist**

Combine linguistic theory with computer science to help AI systems process and analyse language more effectively.

➔ **AI Ethicist**

Ensure a responsible use of AI in language systems, addressing issues like bias and regulatory compliance.

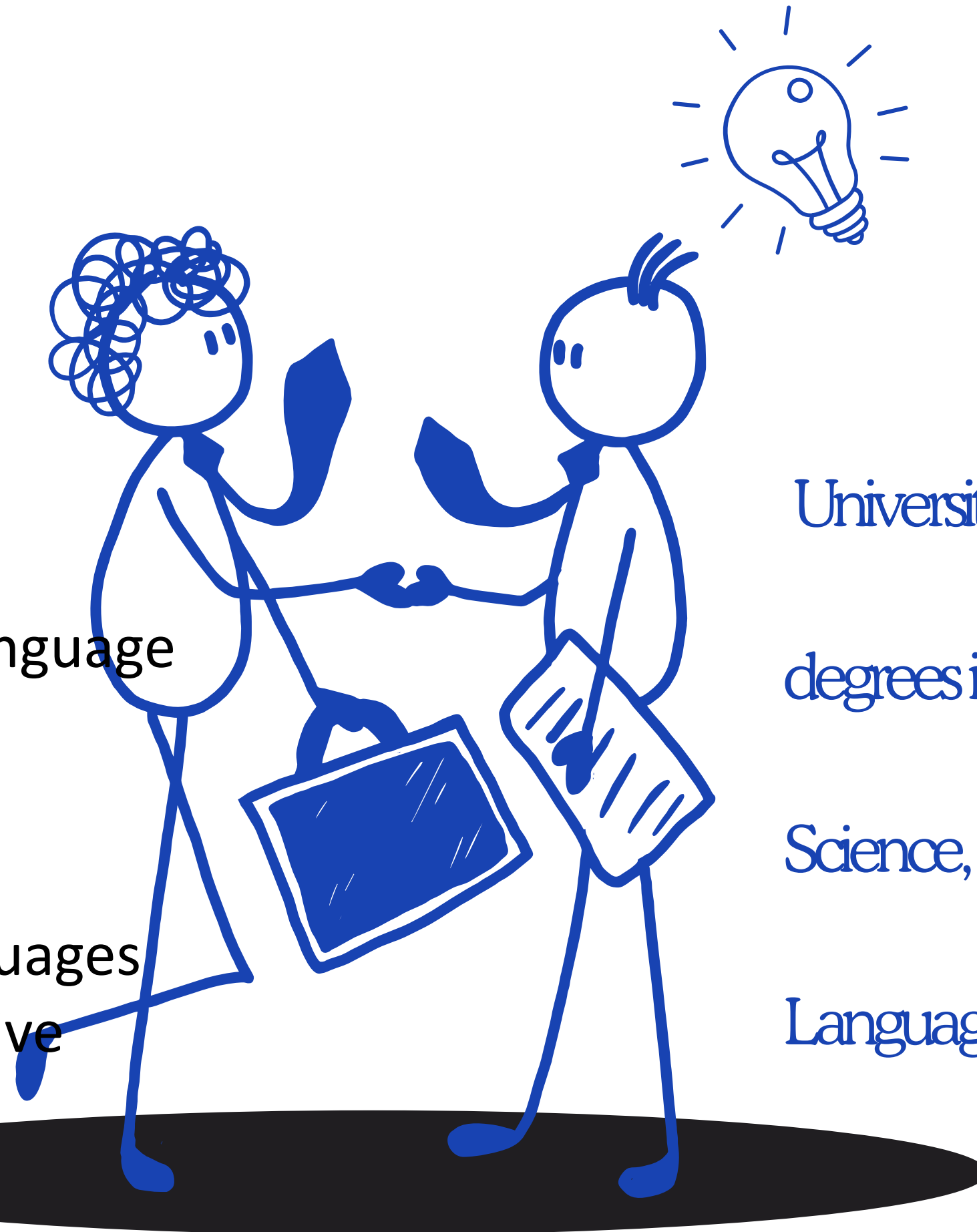
➔ **Localisation Specialist**

Ensure AI generated content is culturally appropriate and grammatically correct for specific target markets.

➔ **Machine Translation Post-Editor**

Refine machine translations to guarantee high quality, accuracy, and cultural appropriateness.

# Languages as partner subjects to Computer science



Highlighting the new relevance to language learning in this context to pupils at secondary school level



Learning about the structure of languages within a Computer Science perspective (Natural Language Processing)

Universities are developing

degrees in Computer

Science, Linguistics and

Languages