Call document

Summary

The Turing’s vision to support skills and capacity building in data science education on a national level has paved the way for our Data Science and AI Educators’ Programme led under the Tools, Practices and Systems Programme and the Skills Programme. This programme takes a ‘Train the Trainer’ approach to equipping educators and domain experts with pedagogical knowledge.

This document provides guidance for applicants and details of how to apply.

The Data Science and AI Educators’ Programme objectives: what’s in it for you?

The objectives of the Data Science and AI Educators’ Programme are as follows:

1. **Develop your professional skills**
   a. Receive customised, example-based and pedagogy-specific training in a supportive, mentor and expert-led environment.
   b. Develop skills in one, or all, of the following key areas:
      - Curriculum development, drawing from existing resources at the Turing and beyond.
      - Adopting and championing existing open-source curricula.
      - Pedagogical approaches to technical training in data science and AI.
   c. Apply skills learned to a wide range of learner groups, including their teams and communities.
   d. Receive peer-based mentoring and expert consultation over several weeks to allow time to reflect and develop skills.
   e. Become a mentor in later rounds of the programme, should you choose to.
   f. Acquire useful and transferable skills: even non-teaching fields demand skills that can be learned through teaching, especially as part of a team and broader community of practice.

2. **Build your confidence as a Data Science and AI educator**
   a. Develop confidence to bring training and resources to communities, including colleagues, team members or students.
   b. Receive feedback in a safe and supportive environment.

3. **Be a part of a nation-wide network of AI educators**
   a. Become part of an inclusive and extensive national network of data science and AI educators, where there is opportunity to foster knowledge, share best practices, make connections and partake in collaborations.

4. **Co-develop this programme by sharing your feedback**
Curriculum outline

The programme supports the uptake of evidence-based practices for teaching data skills into many disciplines through a combination of systematic cohort-based training, cohort calls, and longitudinal mentoring.

This is a 12-week programme, consisting of two half days of intensive study, followed by weekly mentoring calls and cohort calls.

Cohort calls will take place in weeks 2 through to 11 and they will last 90 minutes. A list of cohort call topics can be found below:

<table>
<thead>
<tr>
<th>No</th>
<th>Cohort call topic</th>
<th>Detail</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Identifying learner needs</td>
<td>- To identify learner needs/gaps and be able to integrate them into proposals for department heads</td>
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<td></td>
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<td>- To practise persona mapping</td>
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<td></td>
<td></td>
<td>- To find and adapt pre-existing resources to meet learner needs/gaps</td>
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<td>2</td>
<td>Challenges of teaching Data Science and AI</td>
<td>- To understand wider and systemic challenges facing DS and AI educators</td>
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<td>- To know strategies to overcome the wider challenges</td>
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<td>- To be aware of day-to-day challenges that educators face and develop solutions for these</td>
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<td>3</td>
<td>Post-pandemic teaching: what does it look like?</td>
<td>- To understand different approaches to engaging students</td>
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<td>- To share best practices of how teaching has adapted</td>
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<td></td>
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<td>- To identify what works well and what needs improvement</td>
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<td></td>
<td>- To be able to apply methods to larger cohorts of students</td>
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<td>4</td>
<td>Making learning memorable</td>
<td>- To discuss different ways to make learning memorable and be able to apply this to your own practice</td>
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<td>- To analyse a case study of immersive learning</td>
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<td>5</td>
<td>Embedding ethics into teaching: the background</td>
<td>- To discuss what is meant by ethics - what is our common understanding?</td>
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<tr>
<td>Section</td>
<td>Topic</td>
<td>Objectives</td>
</tr>
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</table>
| 6 | Embedding ethics into teaching: let’s get practical | - To understand what ethics means in the context of data science and AI and in the context of teaching  
- To be able to convince others of the value of ethics in your field  
- To understand ethical considerations for inclusive practice |
| 7 | Assessment and feedback | - To understand how to embed ethics in your curriculum  
- To know considerations for ethics at all stages of teaching (planning, delivery and assessment) and be able to begin to apply this  
- To examine detailed case study/studies on embedding ethics into project lifecycles  
- To know how to bridge the gap between ethics subject knowledge and actual, real-world implementation |
| 8 | Collaborative development and delivery of teaching materials | - To understand the collaborative aspect of designing a course/programme  
- To know how to develop materials from different perspectives e.g. lesson vs. series of lessons vs. whole curriculum  
- To deep dive into building open-source training resources for future use |
| 9 | Working together to embed data science (and data-driven methods) across disciplines | - To understand how data skills are applied to non-cognate disciplines  
- To be able to embed data skills into non-cognate disciplines with confidence  
- To share best practice inc. materials |
| 10 | Making teaching relevant to real-world applications: alignment between industry and academia | - To understand why (most often) training shouldn't be siloed as only theoretical and academical, and why it needs to be useful when applied to real world industry needs  
- To examine case studies of academia using industry real-world applications in practice  
- To discuss how to bridge the gap between academia and industry |
The initial two half-day pedagogy sessions will cover the following topics:

<table>
<thead>
<tr>
<th>Day one</th>
<th>Intro and overview; memory and cognitive load; building skill with feedback; teaching is a skill; homework task</th>
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<tbody>
<tr>
<td>Day two</td>
<td>Live coding is a skill; preparing to teach; equity, inclusion and accessibility</td>
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</table>

**Course structure**

Mentoring calls will be self-organised by each peer group. These will be an opportunity for applicants to discuss and reflect on previous learning and any assignments. Mentoring calls will last between 30 and 60 minutes, depending on each group’s needs.

The programme is, therefore, structured as follows:

<table>
<thead>
<tr>
<th>Week 1</th>
<th>2 half-days of intensive study</th>
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<tbody>
<tr>
<td>Week 2 – 11</td>
<td>Day 1: 30 to 60-minute mentor call</td>
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<td></td>
<td>Day 3: 90-minute cohort call</td>
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<tr>
<td>Week 12</td>
<td>Graduation: 1.5 hours</td>
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**Eligibility and Assessment Criteria**

**Eligibility Criteria**

Applicants must be able to meet all of the following eligibility criteria to be considered for this programme.

- Applicants must be able to commit to an initial 2 half-day intensive workshop, followed by a further period of 11 weeks attending the cohort and mentoring calls. Cohort calls will be between 90 minutes and mentor calls will be 30 to 60 minutes. In total, this will be between 2 and 2.5 hours each week. We understand that there may be instances where applicants cannot attend a session and this must be communicated to the Skills team, training@turing.ac.uk, beforehand. Applicants will have the opportunity to catch up on missed cohort calls, where appropriate. Where applicants miss several sessions, or do not have the capacity to catch up on missed learning, they will be unable to graduate from the programme.
- Applicants must be able to demonstrate a desire to educate. We welcome applications from a diverse range of backgrounds, with an interest in training and teaching at university level or equivalent, and a desire to become an educator. We consider an
‘educator’ to encompass many forms, ranging from instructors or trainers to teaching staff.

Applicants may include, though not be limited to, the following:

- Teaching staff (lecturers, readers, professors etc.) and researchers at universities (e.g. postdocs, ECRs) or national labs from diverse disciplines.
- Educators or professionals from within the higher education system e.g. universities, industry, government, informal mentoring or coaching.

- Applicants must have some experience in, a basic knowledge of, or an interest in teaching and pedagogy.
- Applicants must have a basic understanding in Data Science and AI. Please refer to our FAQ for further details.

Assessment Criteria

When assessing applicants for this programme, we look at the following areas:

Intention setting: what the applicant hopes to gain from attending this programme.
Motivation: why this course interests the applicant.
Route to learners: how the applicant intends to disseminate their learning to other communities.
Open-source: evidence of motivation and practice of open science and teaching.
Reflection: where the applicant feels they are now vs. where they want to be

Application Process

Timeline

<table>
<thead>
<tr>
<th>Application Stage</th>
<th>Key Dates</th>
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<tbody>
<tr>
<td>Applications open</td>
<td>8 March 2023</td>
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<tr>
<td>Applications close</td>
<td>5 April 2023</td>
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<td>Application review period</td>
<td>5 – 12 April 2023</td>
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<tr>
<td>Outcomes communicated</td>
<td>12 – 14 April 2023</td>
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</table>

How to apply

Applicants should apply directly to the Turing through our application page. The application form will ask you a series of questions in line with our assessment criteria, above.
The deadline for applications is 5 April 2023.

**Assessment Process**

All applicants are assessed on their application form only. Applications will first be checked for eligibility. All eligible applications will then be reviewed by the Skills Team. The Turing reserves the right to reject applicants who do not meet the criteria at any stage.

**Equality, Diversity and Inclusion**

The Alan Turing Institute has a mission to make great leaps in data science and artificial intelligence to change the world for the better and recognises that, to make such great advancements and help solve the world’s problems and challenges, we need to accurately reflect the world’s diverse composition and build an inclusive community. The Alan Turing Institute is committed to creating an environment where diversity is valued and everyone is treated fairly.

Promoting and embedding equality, diversity and inclusion (EDI) is integral to achieving our mission. The Institute has defined a set of values and behaviours that it expects the Turing community to demonstrate and lead on: trust, inclusivity, respect, leadership, transparency, and integrity.

We are taking seriously questions of diversity, equity and inclusion as impact and importance to success and excellence in our field, community and mission. We are committed to actively working to embed and ensure our functions and research schemes are accessible, inclusive, and diverse.
The Institute encourages applications from all applicants and welcomes non-standard career paths and breaks spent outside academia.

**Reasonable adjustments**

We recognise that there may be individual circumstances that we need to be aware of and will make reasonable adjustments required to support individuals during the assessment process or during the programme. You may already know what adjustments you require or may like to have a confidential discussion around your options.

To discuss an adjustment to the application process, please contact the skills and training team directly at training@turing.ac.uk.

There is also a section on the application form where applicants may make us aware of individual circumstances. If there is information relevant to your application that we may need to consider when facilitating the review of your application, please contact us to discuss. Where possible, this should be done early in the process or updated when circumstances change. We will treat any information you disclose to us as sensitive and will handle it in line with the Data Protection Act 2018. You can find out more information about how we handle your personal data in our Transparency notice. Information will only be used to arrange reasonable adjustments and will not be used to assess your application.

**Additional funding**

As part of our commitment to inclusion, we recognise that some groups face additional barriers to participating in this programme. For this reason, we offer a fund to support applicants to participate who otherwise would not be able to due to a disability, a caring responsibility or financial hardship. The fund provides expenses awards of up to £500 and applications will be assessed separately to the main call.

For more details, please see our FAQs. If you would like to discuss your application, please contact the Skills team directly at training@turing.ac.uk.

**Further info**

For more information, please see our programme FAQs. Questions can be emailed to the Skills team directly at training@turing.ac.uk.