StudentShapers Recruitment: Calling all Computing students

New Programming Labs for New Programming Languages

Bursary:

2 students for 5-weeks at £330/week, full-time during the summer vacation

Who should apply:

We are looking to recruit two undergraduate students (likely at the end of their first or second year of study, but students at the end of their degree could also apply) with strong programming skills and an interest in the process of teaching/learning programming. We imagine that these are most likely to be Computing students, but are open to applications from other departments.

Campus/Location:

South Kensington (remote work may also be considered)

Project details:

We are looking for two students to work with us during the summer vacation to improve and update our programming exercises and labs, particularly moving from Java to Kotlin. Can you help?

Having recently been through the course themselves, or acted as a lab helper or PPT UTA, we believe that Computing students would be in an ideal position to work in partnership with staff to help to improve the exercises that we use. Our plan is to update some of our first-year material to use Kotlin rather than Java. Our aims are to provide interesting and fun ways of reinforcing key concepts, to make sure we are using good programming style throughout, and that students develop good skills and habits.

Our strong links with industry indicate that at the moment Java (which we have used for teaching object-oriented programming for many years) while still prevalent, is on the decline, while other newer programming languages (such as Kotlin) are gaining traction. In order to be seen as keeping up with (and even leading) developments in programming languages, we would like to update our teaching material, tutorial questions and particularly lab exercises, to use a more modern programming language that will see us through the next (perhaps) 10 years.

This would also be an opportunity to re-vamp and refine existing teaching material, based on our experience of teaching programming over the years, plus your own experience of completing those exercises yourselves.

To engage on this project you would need:

- A strong interest in programming
- Proficiency in both Java and Kotlin
- An interest in developing teaching materials / programming courses and helping people to become better programmers

Our plan is to have two students work together with staff in a small team to develop this material over five weeks during the summer vacation. You would be working together with Robert Chatley, Alastair Donaldson and Tony Field.

We would imagine working closely over the summer, with meetings of the staff/student partners several times per week, with some of these being working sessions, others for review of progress, and less frequently to bring in a wider group of interested parties to spread knowledge of what progress has been made, and to steer the project direction.

From the student side, students will gain an appreciation of constructing a learning journey through various topics, improving and crystallising their understanding of programming concepts through developing exercises to teach them, and developing their communication skills in writing clear and unambiguous instructions and problem statements for students to follow.

How to apply:

Applications should be made via the 'Student Expression of Interest' form on the StudentShapers website (here) or accessed using the above QR code. Shortlisted students will be invited to an informal discussion with faculty members of the project team.

Deadline: Sunday 13th March

Contact details:

Dr Robert Chatley r.chatley@imperial.ac.uk

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