IAESTE UNITED KINGDOM

WORK OFFER

Ref. No. UK-2020-SC-29

Employer Information

Employer: University of Edinburgh
School of Engineering

Faraday Building
Colin Maclaurin Road
EH9 3DW Edinburgh
United Kingdom

Website: www.ed.ac.uk

Location of placement: Edinburgh
Nearest airport: EDI
Working hours per week: 35.0
Working hours per day: 7.0

Number of employees: over 9,000
Business or products: University

Student Required

General Discipline:	14B-CIVIL ENGINEERING, GEOLOGY AND MINING	*Completed years of study:*	3
Field of Study:	14.3301-Construction Engineering.	*Student status requirements:*	Required when nominated
		Language required:	English Good

Required Knowledge and Experiences:

Ideally, a student in their last one or two years of engineering degree, with some coding knowledge (e.g. C++, C#, Matlab).

Other requirements:

Basic knowledge of 2D-3D data processing [desirable but not critical]

Work Offered

The placement entails working with the research team of the CyberBuild Lab (https://cyberbuild.eng.ed.ac.uk/) at the University of Edinburgh, on a project conducted collaboratively with Historic Environment Scotland (HES).

The project focuses on the processing of point clouds (acquired by means of laser scanning and photogrammetry) of masonry structures, to develop more effective surveying practice, that supports tasks such as defect detection and structural analysis.

More specifically, the trainee will work closely with the lead researchers to develop, deploy, and validate an algorithm for the automated detection of all masonry units (i.e. stones) in the point cloud data.

The work will include the following activities:
- Reviewing of key relevant literature.
- Learning existing software code developed by the lab for point cloud data processing.
- Deployment of an existing algorithm being developed by the team.
- Experimental Validation using real case study in collaboration with partner organisation.
- Contribution and implementation of ideas on how to improve the algorithm
- Attendance to weekly lab team meetings with reporting of progress and discussion of path forward.

The trainee will digital skills valued by the changing modernising industry. More specifically, the trainee will develop:
- Knowledge and practical skills in 3D imaging technologies, in particular Terrestrial Laser Scanning and Photogrammetry
- Knowledge of current building surveying processes in the heritage sector.
- IT and computing skills (coding in C++ and/or Matlab).
- Competences in conducting a research project at academic standards (literature review, methodology, development of method; experimental analysis).

Number of weeks offered:	8 - 8	*Working environment:*	Research and development
Within the months:	01-JUN-2020 - 26-JUL-2020	*Gross pay:*	1078 GBP / Month
Or within:	-	*Deduction to be expected:*	0
Company closed within:	-	*Payment method / time of first payment:*	Other Cash or Bank Transfer / 26.06.20
Latest possible start date:	01-JUN-2020		

Accomodation

Canteen at work:	Yes		
Expected type of accommodation:		*Estimated cost of lodging:*	400 GBP / Month
Accommodation will be arranged by:	IAESTE Local Committee Edinburgh	*Estimated cost of living incl. lodging:*	800 GBP / Month

Additional Information

Please note this is an offer from the Scotland region of the UK - contact person Sarah Chidlow

Nomination Information

Deadline for nomination: 15-MAR-2020

Date: 19-DEC-2019 *On behalf of receiving country:* Karen McCormack