university of the arts london

ual:

JOB DESCRIPTION AND PERSON SPECIFICATION

Job Title: Postdoctoral Research Fellow – Materializing Data, Embodying Climate Change (Software Programmer)

Accountable to: Principal Investigator (PI) – Materializing Data, Embodying Climate Change

Contract Length: Fixed-Term for 24 Months

Hours per week: Full-time

Weeks per year: 52

Salary: £38,010 - £45,603 pa

Grade: 5

College: Central Saint Martins

Location: Granary Building, 1 Granary Square, London N1C 4AA

Purpose of Role:

Reporting to Professor Corby and in collaboration with other core team members, you will develop software for the exploration and processing of climate data from analysis of geo-science datasets in order to tool development for 3D modelling and physical output. You will work with a range of climate data resources (including, but not limited to: ocean temperature, salinity, ice, atmospherics, gas, biotics, pollen, plankton, geological processes) using Python by employing commonly used climate, geo-data and spatial data formats. The post-holder will work closely with a Postdoctoral Research Fellow model-maker responsible for outputting data to 3D digital-physical models and will have responsibility for academic reporting and documentation of research (conference papers, journal articles and other outputs), in collaboration with the PI and other core staff.

Duties and Responsibilities

- To support and participate in collaborative research with the PI, Co-Is and the rest of the project team

- To undertake original research towards the production of climate data in physical forms to produce new representations and expressions of climate change, beyond current digital visualisations, graphs and interfaces

- To lead on the development of software and data resources for the above and any additional tasks or documentation as required by the project

- To expand existing research in the field of art-science collaborations concerned with developing cultural and imaginative responses to climate change using its data

- To contribute to the outcomes of the project through involvement in the preparation and presentation of papers at conferences, exhibitions, contributions to refereed journals and the editing and/or authoring of book chapters, where appropriate

- To promote the project through participation in public events, if appropriate, via social media and the project's web presence

- To disseminate the research findings through the project's web presence, conferences, public lectures, events and articles published in relevant journals or e-publications, as appropriate

- To produce content towards a publication, edited collection or other public output as appropriate

- To work closely and collaboratively with the project team, UAL staff and partner organisations by regularly liaising with relevant stakeholders to ensure the smooth running of the project

- To undertake health and safety duties and responsibilities appropriate to the role

- To perform such duties consistent with your role as may from time to time be assigned to you anywhere within the University

- To work in accordance with the University's Equal Opportunities Policy and the Staff Charter, promoting equality and diversity in your work

- To undertake continuous personal and professional development, and to support it for any staff you manage through effective use of the University's Planning, Review and Appraisal scheme and staff development opportunities

- To make full use of all information and communication technologies in adherence to data protection policies to meet the requirements of the role and to promote organisational effectiveness

- To conduct all financial matters associated with the role in accordance with the University's policies and procedures, as laid down in the Financial Regulations

- To personally contribute towards reducing the university's impact on the environment and support actions associated with the UAL Sustainability Manifesto (2016-2022)

Key Working Relationships:

- Principal Investigator
- Co-Investigators
- Specialist Researcher in Arts-Science
- Postdoctoral Research Fellow (3D Modeller)
- Project Partners
- UAL Research Management and Administration (RMA)

Specific Management Responsibilities

Budgets: None

Staff: None

Other (e.g. accommodation; equipment): None

Signed _____ Date of last review _____
     (Recruiting Manager)

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Person Specification	
Specialist Knowledge/ Qualifications	**Essential:** Relevant postgraduate qualification, in fields such as computer-, data- or earth sciences, or physics Has a good working knowledge of software development practice, including languages such as Python; unit and integration testing; source code management tools such as GitHub or similar Has a good working knowledge of data programming frameworks for Python, such as Pandas and scikit-learn or similar Has a good working knowledge of modern agile software development methodologies Has working knowledge of 3D modelling and printing frameworks or APIs for Python, such as Blender, OpenSCAD or similar **Desirable:** A PhD in computer-, data- or computational science, physics, earth sciences or a related scientific discipline Is regarded as an authority in their field of specialism Has a good working knowledge of processing time series and geospatial data, preferably in a climate monitoring context Has a good working knowledge of Python geospatial frameworks, such as Shapely, Geopandas, GDAL or similar Has a good working knowledge of geospatial data formats, such as NetCDF, ASCII Text, ESRI Shapefile or GeoTIFF
Relevant Experience	**Essential:** Has relevant experience in software development methodologies and practice for production-level software delivery

	Experience of collaborative and interdisciplinary research work
	Has relevant experience in managing large-scale software source code
	Has relevant experience in software maintenance and quality control
	Has relevant experience of climate and GIS data programming using Python and appropriate data formats
	Desirable:
	Strong record of successful research activity at post-doctoral level or equivalent and research outcomes
	Has a good working knowledge of climate and GIS data programming using Python and relevant data formats
	Experience of visual and spatial representations of climate and geodata
	Experience of applying to external funding bodies for grants to support own and group research activities
Communication Skills	Communicates effectively orally and in writing by adapting the message for a diverse audience in an inclusive and accessible way
Leadership and Management	Proven ability as an operational task leader, assessing and ensuring appropriate resources and support are available to enable the team and individual members to achieve their objectives
Research, Teaching and Learning	Applies innovative approaches in teaching, research or professional practice to support excellent teaching, pedagogy and inclusivity Applies own research to develop learning and assessment practice
Professional Practice	Contributes to advancing professional practice, research or scholarly activity in own area of specialism
Planning and managing resources	Plans, prioritises and manages resources effectively to achieve long-term objectives

Teamwork	Works collaboratively in a team and, where appropriate, across or with different professional groups
Student experience or customer service	Builds and maintains positive relationships with students or customers
Creativity, Innovation and Problem Solving	Suggests practical solutions to new or unique problems Experience of working independently to set and solve problems relevant to research development