Research Fellow – Fixed term for up to 30 months	
Role Description	

Grade & Salary:	Grade 5 (FTE) £31,604 -£37,706 per annum pro-rata
Campus Location:	ENU Merchiston Campus, Edinburgh (part-time) KTP Company premises, Dundee (full-time)
Line Manager:	Professor Amir Hussain
Line Management Responsibility for:	-
Role Summary:	**Research Fellow (KTP Associate) – Fixed term for up to 30 months:** KTP projects are funded by Innovate UK (https://www.ktpscotland.org.uk/) and aim to help businesses improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base. KTP associates are offered an exceptional opportunity to lead and manage their own unique project, to apply and demonstrate their skills and expertise to real industrial challenges whilst benefitting from the combined support and resources of the two partnering organisations. The successful candidate will be employed by Edinburgh Napier University and based at Ace Aquatec, working directly the IT and Software Director, while liaising with R&D, field engineers and scientists. The project involves collaborating closely with the academic partners at ENU to design and implement an AI-driven software suite, with an intuitive user interface, that enables identification of individual fish and sea lice detection and counting. This includes: assessing available sensing and analytics technologies and how they are best deployed; developing and implementing a strategy to fuse multi-sensor data; assessing and implementing artificial intelligence (AI) and Machine Learning technologies to allow continuous improvements, and exploring scalable integration with future wireless Internet of Things (IoT) sensing, cloud computing/analytics, security and networked systems. Learning from the project will also be transferred and embedded within the company by providing technical support to the senior management, and training to the R&D team and field engineers. Ace Aquatec is a global supplier of aquaculture solutions. It partners with world leading experts in different scientific fields to apply breakthrough technological developments to aquaculture and marine industries. From their head office in Dundee, Scotland, they project manage global R&D projects, manufacturing at two UK factories, and co-ordinate with installers and engineers worldwide. Ace Aquatec also have offices in Canada, Chile and Norway and distribution partners in key markets. They have received two Queen's Awards for Enterprise Innovation in recognition of their pioneering technologies aimed at improving fish welfare without sacrificing on quality or efficiency.

Main Duties and Responsibilities	
➢	Undertake innovative applied research in AI, machine learning and Cloud-based analytics
➢	Processing, aggregating and organising multi-scale data (including from imaging and embedded sensors) for developing AI-based predictive models of individual fish identification, sea lice detection and counting.
➢	Conduct, analyse and validate findings of simulation experiments with on-site environments.
➢	Preparation of patent applications and peer-reviewed publications for quality journals, conferences and dissemination of research results at international and national conferences.
➢	Plan and manage own applied research and development activity in collaboration with industrial partners/teams
➢	Regular liaison with ENU academics, Ace Aquatec engineers and collaborating/partner companies
➢	Embedding technology and upskilling company staff
➢	Supporting company scale up and exploitation of new technology.
➢	Undertake other activities as appropriate to the project, under the direction of the KTP Project Management Team.
➢	Be responsible for ensuring that the information and records processed (received, created, used, stored, destroyed) on behalf of the University are managed in compliance with ALL applicable legislation, codes and policies e.g. Data Protection, Information Security and Records Management.

Person Specification

Attributes	Essential Selection Criteria	Desirable Selection Criteria
Education/Qualifications	Educated to a higher degree or equivalent demonstrable level of industrial research & development experience in one of the following areas: computer science, engineering, or a related discipline	
Experience	Excellent programming skills. A strong background, including applied research experience in machine learning, computer vision, IoT cloud computing/ analytics, or a related area A good publications record in international journals /conferences. A track record of making effective independent contributions to collaborative teams Experience of defining and formulating real-world research problems and questions and, where appropriate, formulating interdisciplinary hypotheses that can be tested in scientific research Excellent quantitative research skills Presentation of research findings at conferences and workshops	Practical and theoretical knowledge of AI, wireless and remote IoT sensing, cloud computing, security, and/or networked systems Knowledge of challenges relating to technology integration (e.g. AI/machine learning with computer vision and IoT Cloud) Experience of practical, real-time software design and development cycle Knowledge of the aquaculture industry landscape and commercialisation of scientific research. Industrial experience and practical skills (e.g. site work).
Skills/Personal Requirements	Excellent ability in applying quantitative techniques to interpret and analyse complex data Excellent communication skills to disseminate research findings to specialised and general audiences both orally and in writing Excellent interpersonal skills, including the ability to engage and communicate with industrial and	Proven ability to generate and implement new ideas.

	academic colleagues and collaborators Excellent organisational ability, with the ability to prioritise own workload to meet tight deadlines. A track record of continuous professional development	