Embedded Image Processing System Engineer (KTP Associate)

For a Knowledge Transfer Partnership between the:
UNIVERSITY of HERTFORDSHIRE and ZIATH LTD

SCHOOL: School of Engineering and Computer Science
LOCATION: University of Hertfordshire, Hatfield, AL10 9AB and Ziath Ltd, Pampisford, Cambridge CB22 3HB

RESPONSIBLE TO: Academic Supervisor – School of Engineering and Computer Science
CONTACT: Fixed term for 30 months

SPOT SALARY: In the range £33,737 - £36,914pa subject to experience

OVERALL PURPOSE OF THE ROLE:
To develop and embed a capability in machine learning, image processing and System-on-Chip (SoC) into Ziath. This will be used to develop the core technology of their next generation sample scanning devices.

BACKGROUND:
Ziath Ltd specialises in instrumentation control and information management in both the academic and the pharmaceutical/biotech industry sectors with a focus on the application of laboratory automation. It concentrates on managing large sample libraries (compound management, biobanking and sample management) using 2D data matrix tubes. Ziath develops innovative and new products designed to simplify processes in life science organisations including pharmaceutical companies, biotech companies and medical academic research.

Ziath designs, manufactures and sells a range of products split into four main categories of 2D barcode scanners, devices for handling tubes, 2D barcoded tubes and sample management software with the barcode scanners representing the majority of the revenue. The company is now poised to build on its strong market position by embracing new technology in 2D barcode to develop the next generation product.

SUMMARY OF ASSOCIATE ACTIVITIES AND MAIN OBJECTIVES:
The KTP Associate will be responsible for delivering the KTP work plan, described below:

Phase 1: Company and product requirement review.
Phase 2: Outline design for the new 2D scanning engine.
Phase 3: Hardware and software framework development and evaluation.
Phase 4: Data Matrix code pre-processing and detection algorithm development, implementation and evaluation using ARM, DSP or FPGA.
Phase 5: Data Matrix code recognition and verification algorithm development, implementation and evaluation using ARM, DSP or FPGA.
Phase 6: Implement functional prototype using system components from phase 3, 4 and 5, integrating algorithms, hardware, software and control interfaces.
Phase 7: Portable prototype production; evaluate, debug and modify final prototype, release design for final production.
Phase 8: Project embedding and documentation, product marketing and commercial.
REPORTING AND MANAGEMENT:

The Associate will be employed by the University of Hertfordshire on a 30-month contract but will carry out duties at the University of Hertfordshire at Hatfield and at the Ziath Ltd company site in Cambridgeshire, depending on which aspect of the project is being worked on at the time.

Expert supervision will be provided by the School of Engineering and Computer Science. The Associate will report to and be managed by their University line manager, who will also be their Academic Supervisor at the University, who will provide support and help with technology, tools and techniques.

Project meetings will be held on a monthly basis and chaired by the Associate.

High level programme review ‘Local Management Committee’ (LMC) meetings will be held every 4 months where the Associate will provide a formal presentation on progress.

Hours of work at Ziath Ltd are a total of 37.5 hours per week; hours are flexible with core hours of 10am till 4pm.

**Holiday:** 22 days, excluding bank holidays, plus 3 days for Christmas (pro-rata in the first year according to start date.)

The Associate will be allocated 10% of their time supported by a £5,000 budget for the purpose of technical, professional and personal development.

**Informal Contact Details:** Helen Podmore, Tel: 01707 286406, email: ktp@herts.ac.uk

This Document outlines the main duties required for the post entitled Embedded Image Processing System Engineer (KTP Associate) to indicate the level of responsibility. It is not intended to be a comprehensive or inclusive list and duties may vary, though will not change the character of the job or the level of responsibility entailed.

ADDITIONAL INFORMATION

Closing Date: 10 May 2020
Interview date: To be advised; interviews will be conducted remotely and may involve two separate rounds
Quote reference: 027414