18/08 : Prototype of EO data storage infrastructure for new Open Cosmos nanosatellite mission

Company: Open Cosmos Ltd

Supervisor: Aleix Megias, Director and Head of Project Management

Location: Harwell Campus, Oxfordshire

Company Description:
Open Cosmos is revolutionising the way space technology is used by providing turn-key solutions for space mission deployment in Earth observation, telecommunications, in-orbit demonstration, science, etc.

Driven by the vision of making space accessible to anyone, we provide simple and affordable access to space using nanosatellite technology. We went from design to delivery of our first nanosatellite QB01 in only four months, followed by a launch and deployment in LEO early April 2017.

The company is currently developing the next generation of satellites and end-to-end services for private and institutional customers to be launched in 2018. Based on the Harwell-Oxford Campus in the UK, we are a young and ambitious team with experience in the aerospace, electronics and software industries. To support our growth and make our vision a reality we are looking for the brightest minds and the best talents in every domains.

Project Description:
Open Cosmos is developing a system that enables *downstream* companies to deploy their own space infrastructure in a simple and affordable manner to access new types of datasets which give them a strategic advantage. Efficient data storage for different types of EO data is critical to enable a streamlined distribution and processing of all data coming from customers' payloads flying in Open Cosmos' nanosatellites.

The applicant will work with the Open Cosmos' *qbapp* team upgrading the database and defining the way data is stored and retrieved by the customer, including the generation of APIs, Graphical User Interface and manuals, and managing some of the cloud infrastructure. The system will have to be designed to have a high degree of automation and scalability. The system will be validated with data generated by *qb01*, Open Cosmos' first satellite in orbit.

The successful applicant can expect to develop:
Experience with PostgreSQL
Ability to write and maintain unit tests
Familiarity with a UNIX-like command-line interface (e.g. Linux / BSD/MacOS terminals)
Knowledge of EO data types and remote sensing techniques.

Knowledge of the space sector

Applicant Specification:
BSc/MSc in Computer Science, Physics/Maths, Engineering or demonstrable experience in computer science
Experience with Databases, PostgreSQL
Familiarity with a UNIX-like command-line interface, data storage and processing
Quick learner
Ability to work independently and under pressure
Interested in working in the space industry in a start-up environment
Ideally:
Experience with C# and/or Java
Understanding of writing parsers/generators for auto-generating code/tests/documentation
Basic familiarity with set theory

Further details:
8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date on or before 7 March, 2018. Salary is £1,500 per calendar month.

Closing Date for Applications: 15th February, 2018
Applications will be through the online form attaching a CV, before the closing date. They will be checked for eligibility and forwarded to the employer.