Job Title	UKATC - Graduate Software Engineer

Detailed Job Description

BACK GROUND

STFC's award winning graduate scheme offers structured training, a real job with real responsibilities from day one and a direct route to professional accreditation. It will allow you to use your degree in a dynamic, creative and collaborative culture.

The UK Astronomy Technology Centre is the national centre for astronomical technology. We design and build instruments for many of the world's major telescopes. We also project-manage UK and international collaborations. An opportunity exists to join the Software Group of the UK Astronomy Technology Centre as a graduate Software Engineer. Our main interests lie in the design and implementation of software systems for astronomical observatories, from web-based applications through to data processing and instrument control. We also work on similar non-astronomy projects.

SUMMARY OF KEY DUTIES

In the first instance it is expected that the successful candidate will be involved in developing a sophisticated web-based application prototyping a future tool for the Atacama Large Millimetre/sub-millimetre Array (ALMA). This project would involve designing user-friendly web interfaces and developing a distributed application making use of cloud services. Key aspects would be Interactions with scientists helping define requirements, developing a basic understanding of radio interferometry, and implementing RESTful services.

RESPONSIBILITIES

Contribute to UKATC software projects as directed.
Ensure that software developed adheres to UKATC software standards.
Ensure that software development follows UKATC software quality procedures.

EXPERIENCE, KNOWLEDGE, SKILLS REQUIRED

- Knowledge of the Javascript and/or Java language;
- Ability to implement a software application from a guideline specification, interacting with scientists and senior engineers to refine the specification;
- A basic understanding of good software development processes in an agile environment, including an ability to write test procedures ensuring that the software developed is of sufficient quality;
- The ideal candidate would be able to understand mathematical concepts and implement them in software;
- The ideal candidate would have an interest in and ability to design user interfaces,

POSITION AND PERSON REQUIREMENTS

SHORTLISTING CRITERIA

QUALIFICATIONS

Essential:
- 2:1 or above, honours degree in a relevant discipline (computer or physical sciences)

- Graduated within the last 18 months of this application
- Right to live and work in the UK

Desirable:
- 1st Class Honours, software engineering, astronomy or physics
- MSc in Computing or Physical Science, or a related subject
- Courses in user interface development
- Courses in OO design & development, and UML

KNOWLEDGE/SKILLS AND EXPERIENCE

Essential:
- Knowledge of the javascript and/or Java programming language
- Understanding the essentials of the software development process
- Ability to implement mathematical algorithms in software

Desirable:
- Experience with the javascript and/or java programming languages
- Experience using UML and OO techniques.
- Some experience with user interface design

PERSONAL SKILLS & QUALITIES

Essential:
- Good communication skills, able to influence people at all levels.
- Demonstrate good team working capabilities
- Good problem solving skills

Desirable:
- Self-motivation to carry out a project
- Interest in applying software to scientific & mathematical problems
- Interest in developing user interfaces

INTERVIEW CRITERIA

PERSONAL SKILLS/QUALITIES
Essential:
- Good communication skills, able to influence people at all levels.
- Demonstrate good team working capabilities
- Good problem solving skills

Desirable:
- Self-motivation to carry out a project
- Interest in applying software to scientific & mathematical problems
- Interest in developing user interfaces

KNOWLEDGE/SKILLS AND EXPERIENCE

Essential:
- Knowledge of the javascript and/or Java programming language
- Understanding the essentials of the software development process
- Ability to implement mathematical algorithms in software

Desirable:
- Experience with the java and/or javascript programming language
- Experience using UML and OO techniques.
- Some experience with user interface design

SPECIAL REQUIREMENTS

Essential:

- The willingness to learn new skills, both technical and non-technical
- Demonstrates a drive and determination to achieve results
- Open minded and flexible in relation to the type of work assigned to them
- Good communication skills, able to influence people at all levels.
- Demonstrate good team working capabilities.

Desirable: