Junior Software Developer
British Trust for Ornithology
BTO harnesses the skills and passion of birdwatchers to advance our understanding of ornithology and produce impartial science, communicated so that it can be of benefit to everyone.

OUR GOALS
BTO increases knowledge of birds and other wildlife, and their relationships with the environment and people, by:

- Enabling more people to learn about birds and science and grow through participation in environmental discovery.
- Delivering impartial, impactful and relevant science.
- Inspiring and empowering people with an understanding of birds and the importance of knowledge.

OUR PRIORITIES
We will reach our goals by:

- Providing more and better opportunities for people to contribute to our work.
- Monitoring the status of species, researching their ecology and understanding how they respond to change.
- Communicating great stories that bring to life the long-term data, information and knowledge that we hold.

OUR IMPACT
Our surveys, monitoring schemes and research programmes are designed by expert scientists to answer some of the most pressing questions affecting birds and their habitats. Because of our independence we are able to share our data, expertise and knowledge to inform decision-makers, educate the public and support conservation action. Our long-term datasets provide a measure of change and enable us to look for impacts and test solutions. Our vibrant volunteer network makes us highly effective and ensures that our work reflects the interests of those for whom birds and wildlife are important.

OUR FOUNDATIONS AND VALUES
The success of BTO is based on firm foundations that include: motivated and skilled staff and volunteers; a strong reputation; a robust business model and effective governance systems and processes.

We are:

- Inclusive and supportive
- Impartial
- Passionate
- Collaborative and open to new ideas

BTO is a Registered Charity Number 216652 (England & Wales), SC039193 (Scotland).
ABOUT THE ROLE

The Internet is the main mechanism by which the BTO collects data from its volunteers and presents its results. Many of our surveys have web applications supporting online data entry and survey management. We also have a set of mobile applications for one of our surveys, with more being considered for future development. We are now interested in recruiting two new software developer posts, whose duties would be developing and maintaining the web and mobile applications for our online surveys, along with other software projects such as data visualisation, cloud services, and internal applications.

The Information Systems department consists of 14 staff specialising in software development, database management, website design and systems support, managed by Associate Director Andy Musgrove. The post holder will work within the Software Development team, reporting to Senior Developer Matthew Baxter. Additionally, the role involves interacting with a range of other BTO staff as required.

WHAT YOU WILL DELIVER

1. To develop and maintain software applications for the collection of data (ecological and engagement/participation) and the dissemination of results over the web, working primarily within a JSP/Java Servlet and JavaScript environment. To use personal initiative in undertaking these tasks, while working closely with survey organizers and other members of the IS team.

2. To undertake programming aspects of web page development, using JavaScript to create dynamic pages, validate web data entry, produce visualisations, and communicate with back-end services.

3. To develop and maintain native and cross-platform applications for mobile devices running on Android and iOS, along with server-side applications and web services to support them.

4. To write comprehensive specifications and technical documentation, in collaboration with survey organisers and users. This will cover both user instructions and technical information required for software maintenance and further development.

5. To train users in the use of BTO computer applications. Target audience is BTO staff but key groups of volunteers and stakeholders may also be involved.

6. To write computer programs for specific applications. To use own initiative to identify or devise appropriate algorithms and to implement them using efficient and well-documented code.

7. To undertake testing of the programs to ensure that they work according to specification. In conjunction with Survey Organisers and other colleagues, to organise user testing of software applications, to evaluate the results of tests and to make necessary corrections to the software.

JUNIOR SOFTWARE DEVELOPER
8. To maintain and develop a good level of expertise in relevant aspects of Java, web design, mobile development, and database operations.

9. To provide effective and responsive technical support on BTO web issues to staff, BTO members and the public.

10. To undertake occasional weekend monitoring of the online database and web applications on a rota system.

11. This is not an exhaustive list; the successful applicant will agree objectives with the line manager.

**WHAT YOU WILL BRING TO THE INFORMATION SYSTEMS TEAM**

1. An undergraduate degree in Computer Science or equivalent, or proven experience in a similar role.

2. A good knowledge of the principles of computer programming and software development. A willingness to investigate and use new and more efficient techniques as they evolve.

3. Good knowledge of Java programming and documentation, particularly with respect to the use of Java Servlets, JSP, and web applications. Experience of coding using Java IDEs, and of the use of version control systems.

4. Excellent web design and HTML skills, coupled with the ability to write JavaScript to run within web pages on various platforms (including mobile devices). Experience of using AJAX to create asynchronous web applications.

5. A good knowledge, and ideally experience of Android, iOS, or cross-platform mobile development, along with experience in building server side web services, would be beneficial but not essential.

6. Experience of web servlet container administration and configuration, and of deploying packaged web applications.

7. A basic knowledge of database programming, particularly efficient design and use of SQL to store, update and retrieve data.

8. The ability to write clear and well-presented requirement and specification documents, and other technical documentation including code comments.

9. A working knowledge of Linux in a server environment, together with the use of Windows and Macs to perform development work.

10. A good general knowledge of computing and the ability to learn new technologies as required.

11. Ability to work effectively on own initiative, individually and within a small team.

12. The ability to communicate well with individuals within the Trust, members, volunteers and the public with a wide range of expertise and to be able to explain or discuss technical issues in understandable terms.

13. An interest in science and/or natural history would be beneficial, although not essential.
FIND OUT MORE ABOUT THE ROLE

For an informal chat about the position please call Matt Baxter on 01842 750050 (email: matthew.baxter@bto.org).

SALARY AND BENEFITS

A salary of £22,431 – £26,669 depending on experience

A 37-hour working week.

The post will be based at BTO, The Nunnery, Thetford, IP24 2PU.

Annual leave entitlement on starting is 25 days plus bank holidays (pro rata if part time). The post holder will qualify for life assurance (four times salary) and be automatically enrolled in the BTO group personal pension scheme, benefitting from an 11% employer contribution.

MAKING AN APPLICATION

If you have what it takes then we look forward to hearing from you – send your completed application form with a CV to Sian Knott via recruitment@bto.org stating the job title in the subject line.

Closing date for receipt of applications is 1pm on Friday 28 February 2020.

It is anticipated that interviews will be on Tuesday 10 March 2020 in Thetford, at the BTO, IP24 2PU.

If you have a disability or long-term illness that otherwise prevents you from meeting any of the essential criteria, please contact us to discuss whether a reasonable adjustment could be made.

As users of the disability confident scheme, we guarantee to interview all disabled applicants who meet the minimum criteria for the vacancy.