



# Full-stack developer (python)

The Mosquito Alert team is a leader in citizen science, dedicated to the research and control of disease-transmitting mosquitoes. By bringing together citizens, scientists, public health professionals, and environmental managers, we tackle vectors of diseases like Zika, Dengue, and Chikungunya. Guided by the principle of "science for social good," our project is based in Blanes, with additional hubs in Barcelona and strong support from public institutions and universities worldwide.

We are entering an exciting phase of growth and evolution, striving to expand globally and assist regions most affected by vector-borne diseases. To achieve this, we are overhauling our internal systems to ensure they are generic, scalable, and adaptable to diverse contexts. Simultaneously, we are reimagining how we connect with users, identifying new opportunities, and launching pilot projects to explore innovative services.

Our platform goes beyond a mobile app for reporting mosquito-related information. It includes a sophisticated backend system that processes and distributes data through standardized APIs. We are advancing towards real-time functionality by automating processes and integrating machine learning models using asynchronous workers, driving efficiency and improving outcomes.

As one of the largest citizen science databases for mosquito ecological data, our vision is to become a global hub for public mosquito-related information. By providing open access to this data, we aim to empower communities worldwide, foster collaboration, and deliver impactful solutions democratically and transparently.

We seek an experienced **Full Stack Python Web Developer** with a strong DevOps mindset to join our team. This role provides an exciting opportunity to contribute to impactful projects, including designing and implementing innovative geofenced APIs, creating dynamic user interfaces, and leveraging advanced technologies such as Zarr, Dask distributed systems, and real-time processing pipelines. You will also help shape the platform's scalability by managing cloud infrastructure with tools like Ansible and Terraform, ensuring the Mosquito Alert project continues to set new standards in citizen science and public health technology.

## Key Responsibilities

- Full Stack Development: Contribute to the development, maintenance, and optimization of the Mosquito Alert platform, with expertise in both backend and frontend development. Strong experience in Python (**Django**, **FastAPI**, or **Flask**) and JavaScript (or TypeScript), with a focus on building dynamic, user-friendly interfaces using frameworks like **Vue.js**, **React**, or **Angular**.
- Infrastructure Automation: Automate infrastructure provisioning and management using **Terraform** for infrastructure as code (IaC) and **Ansible** for configuration management.

- Database Management: Design and manage data layers using **PostgreSQL** and **PostGIS**, ensuring the effective storage and retrieval of geospatial data for the platform.
- Containerization & Deployment: Expertise in containerizing applications using **Docker** to enable efficient, reproducible deployments. Familiarity with continuous integration and continuous deployment (CI/CD) pipelines using tools like **GitHub Actions**.
- Collaboration & Lifecycle Management: Work closely with cross-functional teams, including researchers, developers, and data scientists, to design and implement technical solutions. Engage in the full software development lifecycle—from gathering requirements, designing solutions, and deployment to ongoing support, ensuring system stability and performance.
- Agile Methodologies & Code Quality: Actively participate in Agile development processes, including unit testing, code reviews, and documentation, ensuring high-quality code and efficient system maintenance.

### Nice to have

- Hands-on experience with **Terraform** to manage cloud infrastructure and **Ansible** for automation and configuration management.
- Familiarity with cloud technologies such as **AWS**, **EC2**, and **S3**.
- Experience with map services such as Geoserver.
- Experience with **Deck.gl** or **Openlayers**.
- Understanding of user interface and user experience design principles (UX/UI Design).
- Practical experience with Agile development methodologies.
- Intermediate to advanced proficiency in English for effective communication in an international team.

### Why join us?

- Flexible working hours to promote a healthy work-life balance.
- Remote work options for enhanced flexibility (up to 3 days per week, as per CSIC policy).
- Opportunities to collaborate with renowned national and international R&D and innovation centers.
- A supportive work environment that encourages continuous learning and skill development across diverse disciplines.
- Integration into a dynamic, multidisciplinary scientific team.
- Competitive salary between €30,000 and €50,000 annually, based on qualifications, experience, and contract type, in line with CSIC salary scales.
- The **workplace** is located at the **Centre d'Estudis Avançats de Blanes** (CEAB), CSIC, in Blanes, Spain.



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## Submission of applications

Send Curriculum Vitae and cover/motivation letter to the email: [fbartu@ceab.csic.es](mailto:fbartu@ceab.csic.es) with the subject: **“Full-Stack Developer - [Your Name]”**