YALE UNIVERSITY

Center for Biodiversity and Global Change
Max Planck - Yale Center for Biodiversity Movement and Global Change
Map of Life & Half-Earth Project

SOFTWARE ENGINEER (FULL-STACK)

Work Location
Central Yale Campus, New Haven, Connecticut, USA

Position
On-going full time staff position. Monday to Friday, 37.5 hours per week.

Work environment:
The positions will be based at Yale University, with close collaborative links to our partners worldwide. The Yale BGC Center connects biodiversity scientists from across campus and hosts a range of speaker and workshop events. It supports research and training around the use of new technologies and data flows for model-based inference and prediction of biodiversity distributions and changes at large spatial and taxonomic scales. Flagship Center projects include Map of Life and associated activities supporting the Half-Earth Map and the development of the GEO BON Species Population Essential Biodiversity Variables. For animal movement data we are partnered with the Icarus Initiative, a space station-based near-global GPS animal movement observation system, and Movebank, which supports the management and integration of movement data. For camera trapping data we are members of the Wildlife Insights initiative. Other Center initiatives include the integration of phylogenetic information with spatial distributions (e.g., VertLife), and the NASA-supported development and application of remote sensing-informed layers for biodiversity modelling (EarthEnv).

Yale University offers researchers and staff competitive salaries and a generous package of benefits. Yale has a thriving and growing community of young scholars in ecology, evolution and global change science in the EEB Department, the Yale Institute for Biospheric Studies, the Peabody Museum, and the School of Forestry and Environmental Studies. The town is renowned for its classic Ivy League setting, 75 miles north of New York City.

Position Focus
We are seeking a Software Engineer to work with our growing team of developers and scientists at Yale University in New Haven, Connecticut. This is a unique opportunity to work in a collaborative environment and dynamic team that is developing technological solutions for conservation and research. Both the Yale BGC Center and the MPY Center support research and training around the use of new technologies such as GPS tracking, machine learning, and remote sensing to address questions in ecology, behavior, and conservation.

Much of the technical development work in the Center connects to Map of Life (MOL). MOL aims to support effective and global biodiversity education, monitoring, research and decision-making by assembling and integrating a wide range of knowledge about species distributions and their dynamics over time. Built on a scalable web platform geared for large biodiversity and environmental data, MOL provides best-possible species distribution information together with a range of data and biodiversity indicator products. These products in turn underpin analytics and mapping for the Half-Earth Project.

The ideal candidate will be comfortable at all levels of the MOL technology stack, which organizes data on Google Cloud Platform via Compute Engine virtual machine instances running the Postgres/PostGIS RDBMS, the Earth Engine remote sensing data processing platform, and distributed storage systems such as the Cloud Storage object store and Cloud Data Store schema-less database. A user-facing API is deployed on the App Engine platform to serve browser-based front-ends built on the Angular javascript framework as well as native Android and iOS mobile applications. Candidates should be familiar with writing efficient code that runs across the cloud platform and will help build systems for the internal team to process large data.

Responsibilities:
The Software Engineer will participate in the architecture, design, development, deployment, and maintenance of MOL.org web applications and the APIs that support them. You will work collaboratively to deploy and operate our systems.

Required Education and Experience:
Minimum Bachelor's degree in information technology, spatial sciences or related field. Minimum 2 years experience in software development.

Position requirements:
o   Experience developing responsive web applications using HTML5 and CSS3 on modern JavaScript frameworks such as Angular and React.
o   Server-side experience with Python
o   Demonstrated record of documentation and optimization (include your GitHub/Bitbucket/GitLab handle in application)
o   Basic proficiency in Unix-based systems
o   Ability to work in a collaborative environment, receiving and providing feedback on code
o   Capacity to incorporate user feedback directly into our products
o   Demonstrated experience working independently and as part of a team
o   Effective oral and written communication skills
o   Eligible to work in the United States

Preferred skills:
o   Knowledge of web application development frameworks (Angular, Flask, Webapp2)
o   Experience in designing, developing and consuming web services using RESTful API
o   Knowledge of JS build and packaging tools (Grunt, Gulp, NPM, Browserify etc)
o   Experience with Google Cloud Platform
o   Experience with hosted platform-as-a-service systems such as Google App Engine and CARTO
o   Experience developing geospatial applications
o   Experience with visualizing large datasets

Please apply to this position here. If you have any questions, please email jobs@mol.org. The position will remain open until filled.