iNaturalist Systems architect

Timeline: initial 5-month contract
Compensation: $80,000

iNaturalist is the world's largest community of naturalists. Every day tens of thousands of people from around the world work together on the platform to share their nature explorations and collaborate towards science and conservation. Our 2030 vision is to connect 100 million people to nature through our platform.

To do this, we need your help to keep iNaturalist's infrastructure scaling. We'd like to start by offering a 5-month contract to help research, design, and implement improvements or alternatives to help iNaturalist's core infrastructure, such as our search functionality, to perform at larger scales. We expect to hire a full-time systems architect at the end of the contract period. Depending on the applicant, there may be a possibility to transition from one role to another.

POSITION SUMMARY:

The systems architect will work alongside our team of five other developers including the member of our team chiefly responsible for dev-ops**.** The work can be done remotely, but the position will require working closely with the iNaturalist team through weekly iteration meetings and daily Slack and Github communication. The work will require forking and setting up local instances of the iNaturalist infrastructure, implementing changes to the infrastructure, testing at production scales, and helping apply changes to iNaturalist's production systems.

More specifically, we're looking for someone with experience and ideas to try in order to ensure that iNaturalist users continue to receive fast responses to search queries at larger scales, and will do the work to implement and test these improvements. Search functionality is core to iNaturalist and impacts the response time of most parts of the platform and most new features we have planned. Our goal at the end of this contract is to have an implementation that either performs better than our current system at our current scale, or performs as good as our current system at larger scales.

POSITION DUTIES AND RESPONSIBILITIES:

- Help iNaturalist improve performance of existing data management systems
- Help design, test, and implement improvements to existing data management systems or replacements for these systems in order to scale from hundreds of millions to billions of documents

QUALIFICATIONS:

A qualified candidate will possess a combination of the following experience:

- Working with large-scale multi-node, multi-index Elasticsearch (or similar) clusters

- Working with large-scale (>1M rows) relational database management systems (RDBMS)
- Experience with database replication a plus
- Experience with configuration management systems a plus (Chef, Ansible, etc)
- Experience with Ruby, Node.js, or Python a plus
- Familiarity with open source systems and multiple cloud providers (e.g. AWS, GCP, Azure)

APPLICATION PROCESS:

Email your application to help+jobs@inaturalist.org and mention the iNaturalist Systems Architect posting.

Please send a resume highlighting experience with the above experiences along with a cover letter that includes when you could start.

Applications will be reviewed on a rolling basis until the position is filled. Ideally, we would select an applicant by early February 2022.