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Full Stack Software Developer - Python, GIS, French language skills

**Job Category:** Information Technology

**Requisition Number:** FULLS003241

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Posting Details

* + Posted: February 15, 2023
* Full-Time
* Locations

Showing 1 location

Remote

Job Details

Description

Everyone deserves the opportunity to build a better future. This simple idea has been at the heart of [TechnoServe’s](http://technoserve.org/) work around the world for over 50 years. TechnoServe is a pioneer in leveraging the power of business and markets to create sustainable pathways out of poverty.

The low-income communities in which we work are full of enterprising people. Their small-scale farms and businesses are the keys to economic development. But they face many challenges: low literacy, lack of access to jobs and markets, unpredictable political dynamics and, increasingly, the effects of climate change. For many women and young people, the challenges are even more daunting. Working with TechnoServe staff, people around the world are lifting themselves out of poverty. The results are amazing...when incomes increase and living conditions for families get better, they are able to access health care and education previously out of reach. Communities and even whole countries are better off.

**Overview:**[TechnoServe’s Prosper Cashew project](https://www.technoserve.org/prosper-cashew/) builds partnerships, bringing together processors and other supply-chain actors, investors, and the public sector to keep the economic and social value of the cashew at its source in West Africa. The Prosper Cashew project includes piloting Geospatial technology to map cashew producing areas across Côte d’Ivoire. Building upon the work completed in the [USDA BeninCajù program](https://www.technoserve.org/our-work/projects/cashew-integration-and-acceleration-program/), we aim to create tools for mapping and traceability in the West Africa cashew sector, supporting a strong value proposition for traceable organic cashew.

**Product:**The Full Stack Software Developer will build a responsive web-based dashboard for cashew plantation areas in Côte d’Ivoire to visualize the geographic database of remote sensing data (satellite and drone) and ground data (yields, quality, training data, nursery locations, farm boundaries, etc.), as well as data from data collection tools (e.g CommCare), drone imagery tools, and traceability tools. This will build upon and adapt the codebase, satellite/Machine learning algorithm developed for the BeninCaju Program.

**Collaboration:**Reporting to the Senior Manager of Product Management and Engineering (Kigali, Rwanda), The Full Stack Software Developer will collaborate with TechnoServe Côte d’Ivoire and Prosper Cashew teams, the Director of TechnoServe Labs (Silicon Valley, California), and Researchers from the University of Minnesota.

**Primary Functions & Responsibilities:**

* Development of a cashew satellite dashboard for Côte d’Ivoire, building on a similar successful project in Benin ([https://cajuboard.tnslabs.org](https://cajuboard.tnslabs.org/)).
* Integrating the satellite / machine learning algorithm developed by the University of Minnesota for mapping cashew to the dashboard.
* API integration of the dashboard backend database with third party applications such as CommCare, traceability tools, and third-party geospatial tools. Computation and visualization of other data layers from ground data, yield surveys, nurseries, plantations/farms, mother trees, drone survey data and other data sources.
* Using GIS capabilities in the dashboard to –
  + Compute the cashew growing surface for Côte d’Ivoire and administrative districts within Côte d’Ivoire and visualize this data.
  + Develop analytics and tools to make recommendations for good agricultural practices (GAP), training and nursery locations.
* Building user management, authentication and access control
* Deployment of the dashboard to amazon web services (AWS).
* Recommending data structures for government agencies to facilitate integration with structured databases and geographic information system (GIS) systems
* Providing post go-live support for the dashboard, and making improvements based on user feedback and field validation output

**Basic Qualifications**

* Undergraduate degree in computer science, software engineering, AI and machine learning, or a related field with at least five years of experience in web and mobile application development; or Master's degree plus three years of experience
* Programming experience with Python (Jupyter, python mapping libraries, folium), Django, Javascript, Bootstrap, GIS tools (QGIS, GEE), Rest APIs, JSON, MySQL/MariaDB, AWS.
* Experience with version control and project management tools. e.g GitHub and Trello
* Fluency in English and Proficiency in French

**Preferred Qualifications:**

* Familiar with working in an Agile environment is preferred.

**Knowledge, Skills, & Abilities:**

* Excellent problem solving and analytical skills
* Excellent oral/written communication and presentation skills
* Ability to work both independently and as part of a team
* Strong interpersonal, cross-cultural and team-building skills

This position will be based, remotely, in one of the [African countries where TechnoServe has operations](https://www.technoserve.org/our-work/where-we-work/#africa). TechnoServe will not provide sponsorship or work authorization for this position, and all applicants must have work authorization in the country from which they are applying.

We encourage all qualified individuals who share TechnoServe's vision of improving the lives of others through proven business solutions to apply.

With our commitment to diversity, we are proud to be an equal opportunity employer and [affirmative action employer](https://www.technoserve.org/about-us/work-with-us/notice-of-affirmative-action-programs) and do not discriminate on the basis of gender, race, color, ethnicity, religion, sexual orientation, gender identity, age, HIV/AIDS status, protected veteran status, disability and all other protected classes.

We are also proud of our commitment to protecting staff, partners, and beneficiaries from abuse and exploitation and thoroughly vet all final candidates through rigorous background and reference checks.

If you have a disability that affects your ability to use our online system to apply for a position at TechnoServe please contact the Human Resources at [recruitment@tns.org](mailto:recruitment@tns.org) or call +1 202 785 4515.

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[50 Years of Business Solutions to Poverty](http://www.technoserve.org/)