**CONSULTANCY - TERMS OF REFERENCE**

**Software Development Mentor**

*Division: UNICEF Office of Innovation, Stockholm, Sweden*

*Duration: 11 months, part-time*

*Duty Station: Remote*

**Advertising summary**

The UNICEF Venture Fund is looking for a Software Development mentor to provide technical expertise to the Fund’s early-stage investments in emerging technologies. This role will also support the Fund in building related prototypes to increase the Fund’s efficiencies and to explore various functionality for existing digital public goods.

Candidates should have work experience in and are comfortable with various programming languages (Java, Python, JavaScript, etc.). The candidate is expected to have experience with full-stack development and some developer operations (e.g. React JS, Node JS, Docker, Kubernetes).

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**Child Safeguarding**

Is this project/assignment considered as “Elevated Risk Role” from a child safeguarding perspective? ☐ YES ☐ NO

If YES, check all that apply:

**Direct contact role** ☐ YES ☐ NO

If yes, please indicate the number of hours/months of direct interpersonal contact with children, or work in their immediately physical proximity, with limited supervision by a more senior member of personnel:



**Child data role** ☐ YES ☐ NO

If yes, please indicate the number of hours/months of manipulating or transmitting personal-identifiable information of children (name, national ID, location data, photos):



**More information is available in the** [Child Safeguarding SharePoint](https://unicef.sharepoint.com/sites/DHR-ChildSafeguarding/SitePages/Amendments-to-the-Recruitment-Guidance.aspx) and [Child Safeguarding FAQs and Updates](https://unicef.sharepoint.com/sites/DHR-ChildSafeguarding/DocumentLibrary1/Child%20Safeguarding%20FAQs%20and%20Updates%20Dec%202020.pdf)

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UNICEF works in some of the world’s toughest places, to reach the world’s most disadvantaged children. To save their lives. To defend their rights. To help them fulfill their potential.

Across 190 countries and territories, we work for every child, everywhere, every day, to build a better world for everyone.

And we never give up.

**For every child...innovate**

UNICEF has a 70-year history of innovating for children. We believe that new approaches, partnerships, and technologies that support realizing children’s rights are critical to improving their lives.

The **Office of Innovation** is a creative, interactive, and agile team in UNICEF. We sit at a unique intersection, where an organization that works on huge global issues meets the start-up thinking, the technology, and the partners that turn this energy into scalable solutions.

UNICEF's Office of Innovation creates opportunities for the world's children by focusing on where new markets can meet their vital needs. We do this by:

* Connecting youth communities (or more broadly -- anyone disconnected or under-served) to decision-makers, and to each other, to deliver informed, relevant, and sustained programmes that build better, stronger futures for children.
* Provoking change for children through an entrepreneurial approach -- in a traditionally risk averse field -- to harness rapidly moving innovations and apply them to serve the needs of all children.
* Creating new models of partnership that leverage core business values across the public, private and academic sectors in order to deliver fast, and lasting results for children.

The Office of Innovation specifically looks to form **partnerships around frontier technologies** (like drones and UAVs, blockchain, 21st century skills, urban technologies, new banking tools, wearables and sensors, or 3D-Printing) that exist at the intersection of $100 billion business markets and 1 billion person needs – and to identify how they can grow and scale profitably and inclusively.

**Our team**

We're an interdisciplinary team around the world tasked with identifying, prototyping, and scaling new technologies and practices. With our partners, we focus on convening and collaborating on new and different solutions, low- and high-tech, by:

* **Looking** at the 2–5-year horizon to evaluate emerging and trending technologies and to see how UNICEF can work with the private sector on doing better business while improving essential services for children.
* **Investing** in early-stage solutions that show great potential to positively impact children in the 02-year future including the Venture Fund that invests in open source technology solutions from start-ups based in UNICEF’s programme countries;
* **Identifying** proven solutions that can be implemented at national scale in multiple countries – taking the ideas that help thousands in one country, bringing them to dozens of countries across multiple sectors, and impacting the lives of millions of children.”

**How can you make a difference?**

UNICEF Venture Fund is looking for a seasoned Software Development mentor. This is a part time consultant role within the Office of Innovation, reporting to the Venture Fund team.

You are an experienced professional in software engineering and/or information technology, particularly in the context of early-stage innovation. You will work with emerging technology startups onboarded to the Venture Fund on software architecture, product planning, software development lifecycle, and software engineering best practices. You will also contribute to an Open-Source toolkit for startups to help them build better technology. Furthermore, this role will support the Fund companies in building their prototypes by meeting regularly with the companies and helping them assess where gaps might exist, developing a roadmap for support over their investment period, and connecting them with resources to unblock challenges as they occur.

**Your main responsibilities will be:**

1. Provide specialized technical guidance to the Venture Fund startups and country office pilots, specifically supporting software engineers by:

* Improving operations by conducting system analysis and recommending changes in procedures and policies.
* Develop and maintain standards for quality documentation and work with UNICEF Venture Fund companies to ensure project conventions and best practices a clearly documented and uploaded onto agreed-upon public source code repositories (e.g., GitHub, GitLab, Pagure, etc.).
* Support the Venture Fund in portfolio company repositories and validate that they are in line with contractual requirements.
* Develop technical resources and tools based on technical needs.
* Perform basic testing and validation of the software built by portfolio companies in a developer environment. Compare product demos against the code hosted in public repositories.

1. Provide technical support for cohorts call for submissions, reviewing submissions to the UNICEF Venture Fund and joining Demos.

1. Support various technical engagements, including internally with the Venture Fund team, collaboration with external partners on prototypes and demonstrating solutions by developing documentation, flowcharts, diagrams, etc. for other developers (internal and external).

1. Building on the learnings from working with a cohort of investees, develop recommendations on how software development best practices can be integrated into the existing support structure and process for startups.

1. Contribute new content and maintain existing content in the [UNICEF Software Development toolkit](https://github.com/unicef/ooi-toolkit-software). This includes maintaining and updating the curriculum toolkit, developing programme documentation and guides for other mentors, and creating new articles for mentees based on common problems faced across a cohort.

**Description of assignment**

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| --- | --- | --- | --- |
|   | **Month**  |   |   |
|   | **1**  | **2**  | **3**  | **4**  | **5**  | **6**  | **7**  | **8**  | **9**  | **10**  | **11**  |
| **Objective/Deliverable**  |   |   |   |   |   |   |   |   |   |   |   |
| **Provide specialized technical guidance on software development to Venture Fund start-ups at the early stage, bridge funding stage and acceleration stage**  |
| **Activity**: Review existing codebase, technical architecture diagrams, and functional requirements documents to determine a technical needs assessment of each of the Venture Fund startups   Deliverable: Update notes in each cohort mentorship tracker; updates notes, and summary saved in the mentor's SharePoint folder;   |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Conduct mentoring sessions with each company monthly to track progress and provide guidance.   Deliverable: Update notes and summary in each cohort mentorship tracker.   |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Design and structure technical workshop for cohort workshops as relevant  Deliverable: Host workshop; upload relevant documents in mentor's SharePoint folder.  |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Participate in Venture Fund + Mentor monthly roundtables to identify strategic avenues to support the companies   Deliverable: Attend monthly meetings  |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Contribute new content and maintain existing content in the UNICEF Software Development toolkit   Deliverable: Robust and updated UNICEF Software Development toolkit that can be scaled across the Venture Fund.   |   |   |   |   |   |   |   |   |   |   |   |
| **Support UNICEF Venture Fund companies to stabilize and validate products during the user testing phase with UNICEF country offices and other pilots to ensure technical requests/needs are being addressed.**  |
| **Activity:** Ensure all products are stable at the end of the user testing phase based on an identified metric for each start-up and incorporate technical requests/needs related to bugs and major functionality into product roadmap planning.  Deliverable: Updates notes, and summary saved in the mentor's SharePoint folder.   |   |   |   |   |   |   |   |   |   |   |   |
| **Work with the Digital Public Goods Alliance team to transition Venture Fund start-ups to a Digital Public Good.**  |
| **Activity:** Conduct a technical and functional gap analysis for projects to identify what steps are required to convert them into Digital Public Goods. Once identified, work with the DPGA to transition projects.    Deliverable: Updates notes, and summary saved in the mentor's SharePoint folder.   |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Join the DPG Standards Council on a reoccurring basis as an expert contributor.   Deliverable: Updates notes, and summary saved in the mentor's SharePoint folder.   |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Support DPG project review process providing expert level consultation on *Indicator 4. Platform Independence*  **Deliverable:** Update notes, and summary on number of projects reviewed  |   |   |   |   |   |   |   |   |   |   |   |
| **Provide technical guidance to the Venture Fund team, as well as country offices**  |
| **Activity:** Based on existing platforms, projects, and future projects in the Venture Fund team, recommend strategies to streamline various technical procedures (deployments, code management, leveraging and creating Open-Source resources, etc.).    Deliverable: Updates notes, and summary saved in the mentor's SharePoint folder.   |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Skills and knowledge transfer to the team on template for apps development, and standardized documentation of API development. Blog posts for highlighted work.   Deliverable: Updates notes, and summary saved in the mentor's SharePoint folder.   |   |   |   |   |   |   |   |   |   |   |   |
| **Activity:** Provide technical support for cohorts call for submissions, reviewing submissions to the UNICEF Venture Fund and joining Demos.   Deliverable: Completion of forms related to calls for submission, attending demos. All other updates saved in the mentor's SharePoint folder.   |   |   |   |   |   |   |   |   |   |   |   |
| **Payment Schedule: Invoicing # sessions\* monthly**   | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  | **Up to 9 sessions**  |
|  All activities and deliverables to be calculated as part of Software Development Expert session. 1 session = 8 hours. Consultant must keep track of sessions per month and may invoice up to the maximum listed in the payment schedule above. The maximum # of sessions for invoicing are 99.  |

**To qualify as an advocate for every child you will have…**

* An advanced university degree (Master’s or higher) in computer science, engineering, or another relevant field.
\*A first University Degree in a relevant field combined with 2 additional years of professional experience may be accepted in lieu of an Advanced University Degree.
* A minimum of 8 yearsof relevant professional experience in developing applications, preference given to full-stack software development projects
* Technical experience in:
* JavaScript front-end frameworks (React, Vue, Angular, etc.)
* Languages: Node.js, Ruby, Python, Java, Rust, Go, C++, Bash, Powershell, etc.
* Cloud services: Azure, AWS (Amazon Web Services), Google Cloud, etc.
* Geospatial DBs, libraries and data structures
* SQL and NoSQL database systems
* Experience with git, pull requests, and continuous integration and deployment.
* Experience working in an Open-Source project community with an active upstream community.
* Extensive experience with system integration, interface design, API development
* Proven capacity to work with collaborative teams across various locations and with different technical skills.
* Experience in knowledge sharing, capacity building or training for innovation is desirable.
* Excellent written and oral communication skills in English required. Knowledge of another official UN language (Arabic, Chinese, French, Russian or Spanish) or a local language is an asset.
* A track record of providing technology-centered mentorship and assistance to early-stage products.
* Experience of identifying and developing technical assistance tools for companies
* Demonstrable understanding (and ideally experience) of how frontier technology can be applied to social impact solutions.

**Travel:**

* The consultant is expected to travel to Stockholm, for a stay of 4 days, 3 nights.
* The consultant is responsible for arranging his/her own travel, including visa and travel insurance.

**Payment details and further considerations**

* Monthly payment, based on # mentorship sessions conducted relateed to the agreed deliverables. Approved upon monthly review with supervisor. The maximum number of sessions that can be invoiced is 99.
* Consultant is responsible for his/her own health and travel insurance
* Consultant is eligible for standard DSA for all work-related travel

**How to apply:**

* Interest applicant is required to submit a financial proposal with all-inclusive fee. Please see the financial proposal template.
* Financial proposal must include travel costs (economy class) and daily subsistence allowance, if travel is required as per TOR and any other estimated costs: visa, travel/health insurance.
* **Applications without a financial proposal will not be considered.**

**For every Child, you demonstrate…**

UNICEF's values of Care, Respect, Integrity, Trust, Accountability, and Sustainability ([CRITAS](https://uni.cf/UNICEFValues)).

To view our competency framework, please visit [here](https://www.unicef.org/careers/media/1041/file/UNICEF%27s_Competency_Framework.pdf).

UNICEF is here to serve the world’s most disadvantaged children and our global workforce must reflect the diversity of those children. The UNICEF family is committed to include everyone, irrespective of their race/ethnicity, age, disability, gender identity, sexual orientation, religion, nationality, socio-economic background, or any other personal characteristic.

UNICEF offers reasonable accommodation for consultants/individual contractors with disabilities. This may include, for example, accessible software, travel assistance for missions or personal attendants. We encourage you to disclose your disability during your application in case you need reasonable accommodation during the selection process and afterwards in your assignment.

UNICEF has a zero-tolerance policy on conduct that is incompatible with the aims and objectives of the United Nations and UNICEF, including sexual exploitation and abuse, sexual harassment, abuse of authority and discrimination. UNICEF also adheres to strict child safeguarding principles. All selected candidates will be expected to adhere to these standards and principles and will therefore undergo rigorous reference and background checks. Background checks will include the verification of academic credential(s) and employment history. Selected candidates may be required to provide additional information to conduct a background check.

**Remarks:**

Only shortlisted candidates will be contacted and advance to the next stage of the selection process.

Individuals engaged under a consultancy or individual contract will not be considered “staff members” under the Staff Regulations and Rules of the United Nations and UNICEF’s policies and procedures and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.

The selected candidate is solely responsible to ensure that the visa (applicable) and health insurance required to perform the duties of the contract are valid for the entire period of the contract. Selected candidates are subject to confirmation of fully vaccinated status against SARS-CoV-2 (Covid-19) with a World Health Organization (WHO)-endorsed vaccine, which must be met prior to taking up the assignment. It does not apply to consultants who will work remotely and are not expected to work on or visit UNICEF premises, programme delivery locations, or directly interact with communities UNICEF works with, nor to travel to perform functions for UNICEF for the duration of their consultancy contracts.