RWANDA POLYTECHNIC
IPRC TUMBA
Integrated Polytechnic Regional College
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Call for Professional Internship

1. About the project

IPRC Tumba in collaboration with National Council of Sciences and Technology and Kivu Cold Group is implementing a project titled **Construction of Off-Grid Cold Chain and Crop Trading Platform in Rwanda** on a tripartite basis. Kivu Cold Group is the employer of the Principal Investigator (PI) for this project, National Council of Sciences and Technology is the grantor and IPRC Tumba is hosting the project as a higher learning institution.

Through this project, prototype for this service which is expected to solve post-harvest loss by 35% using off-grid renewable energy driven cold storage as well as easy and fast mobile application will be developed and tested. It is expected that through this project, agricultural sector in which all production is distributed in the best shape, at the best price and to the best market by construction of an off-grid cold chain and crop trading platform in Rwanda will be realized.

2. Objectives for the Call

In the alignment to Kivu Cold Group vision of **"realize agriculture with all products distributed in the best shape, at the best price, to the best market"**, **Kivu Cold Group** through its employee as a Principal Investigator got a grant from NCST (National Council of Science and Technology) to do a prototype of **MoFresh Boxes** and test it. After an observation of the competences that are needed for this project, they have identified IPRC Tumba as host institution in order to help them to identify competent workforce especially through Internship opportunities for Hardware and software development to be able to meet project objectives.

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3. The Internship call

Are you a fresh graduate from IPRC Tumba in the batch of 2019 to 2020 and enthusiastic about hand on skills and innovation projects? Are you ready to take on the challenge of multiple responsibilities, playing the role of gathering and analyzing user/business system requirements, responding to outages and creating application system models. Participate in design meetings and consult with the team to refine, test and debug programs to meet business needs. Interact and sometimes direct third-party partners in the achievement of business and technology initiatives? Do you have an adaptable mindset to work as part of a dynamic team? Do you want to learn by doing? If yes, then do not miss this important internship opportunity.

Number of Interns required	7
Focus areas of internship	1.Information Technology 2.Renewable Energy 3.Electronics and Telecommunication
Reporting to	A joint supervision team from IPRC Tumba and KIVU Cold Group
Duration of internship	Six-months
Facilitation	Facilitation will be provided to interns to be able to deliver on their duties
Internship Hour and Place	Full Time KG 652St-Rugando, Kigali, Rwanda
Application Period	Start date: **November 02nd , 2021** End date: **November 09th, 2021 at 12:00 PM.** Only shortlisted candidates will be contacted for an interview.

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Interview date and place:	The place and date for the interview will ONLY be communicated to shortlisted candidates
How to Apply	Interested applicants fulfilling requirements indicated below are invited to submit their applications, CVs, and qualifications to: Email: off_gridproject@iprctumba.rp.ac.rw and give carbon copy (CC) to: Email kivucoldgroup@gmail.com **Note**: Your attachments MUST be scanned as **ONE** single **pdf** document for easy download and analysis of the application.

The following are the responsibilities and skills required in specific areas of internship:

1. **Renewable energy (with a sound knowledge in design and metal fabrication)**

Responsibilities

- Design and simulation of Off-Grid Cold box structure.
- Guide and supervise during assembling.

Required Skills

- Experience with ANSYS MAXWELL or SOLIDWORKS.
- Able to conduct Thermal dynamic simulation with either software highlighted above.
- Should be able to make decisions according to the data from simulations.
- Teamwork
- Flexible and innovative.

2. **Electronics and Telecommunication (with knowledge in Internet of things and its applications)**

Responsibilities

- Design and simulation of portable IOT devices for off-Grid Cold box.
- Provide a link between device and application software.
- Guide and supervise during assembling.

Required Skills

- Experience with proteus or multiSim electronic simulator software.
- Experience with electronic design automation (EDA) that lets printed circuit board (PCB) designers seamlessly connect schematic diagrams, such as Altium or eagle.
- Able to conduct simulation with either software highlighted above.
- Should be able to make decisions according to the data from simulations.
- Teamwork.
- Flexible and innovative.

3. Information Technology

Responsibilities

- Collaborate with team to brainstorm and create products
- Develop software solutions by studying information needs; studying systems flow, data usage, and work processes; following the software development lifecycle
- Ability to work with other developers for building applications that seamlessly interact with many others
- Creating servers and databases functionality
- Write user guides and technical documentation
- Integrate software components and third-party programs
- Identify ideas to improve system performance and impact availability
- Develop documentation throughout the software development life cycle and reporting
- Ability to test and debug to improve application optimization for better performance
- Designing and developing APIs
- Ensure the technical feasibility of UI/UX designs
- Collaborate with back-end developers and web designers to improve usability

Required Skills

- Experience with software development in a test-driven environment
- Ability to develop unit testing of code components or complete applications.
- Experience with JavaScript and web development frameworks (AngularJS, Bootstrap, jQuery, React JS)
- Fluent with functional, imperative, and object-oriented languages; knowledge of Java, Scala, and/or JavaScript, Python would be especially useful

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- Experience with Web services development, architecture styles/APIs
- Experience with SQL, MYSQL and PostgreSQL
- Familiarity with the Laravel framework, PHP language
- Knowledge of designing RESTful APIs
- Be available online during working hours
- You will work in a fast-moving self-managed environment
- Possess excellent interpersonal, written, and verbal communication skills and are comfortable working with multiple stakeholders to understand and explain highly technical information in a clear, concise manner
- Attention to detail

Eng. MUTABAZI Rita Clémence
Principal