Hiring Process,

Interview Stage:
Written interview

Education

1. **How did you fare in high school mathematics, physical sciences, and computing? Which were your strengths and which were most enjoyable? How did you rank, competitively, in these subjects?**
   - Math is a subject that always continues to pull my interest up, especially as a software developer, in algorithms, self-analyzing, and computational thinking. So I can proudly say that I did very well in math not only because I was strong but because I really understand its future meaning.
   - Physical Science: Being young in high school, I didn't understand the importance of physical science, so I wasn't strong enough in it, it was after many years that I realized that the body should always be in good shape.
   - Computing has always been my passion, despite the fact that we did not have many comforts, materials, and time in the lab, I can say that I manage very well in that domain.
   - My strength: was that I was not the most intelligent but somehow among the clever ones, the most enjoyable were mathematics and computing.
   - if I had to rate myself, I would always place in the top 10 overall, but in areas like math, I must say that I was always among the strongest.

2. **What kind of high school student were you? Apart from the required work, what were your interests and hobbies? What would your high school classmates remember you for, if we asked them?**
   - I attended a mixed high school run by nuns, where the competition was really tough between girls and boys.
   - My interest in computer things was only based on hacking, I didn't have a computer and I didn't practice, I just read articles, but as a hobby, I always liked reading books and listening to it music.
   - What my colleagues may remember of me is my passion for hacking, even if I suck.

3. **In languages and the arts at high school, what were your strongest subjects, and how did you rank in those among your school peers?**
   - In languages: I can really say that I was strong, but the main language was French, English was a secondary language, each year we increased the level a little, but it was in my last two years that I started to consider my level of English and to increase it, fortunately before university, I changed the system from French to the complete English system.
   - I've always been one of those people who like grammar and spelling, so I can say my level is really good, regardless of the language.

4. **Please outline some high school achievements considered exceptional by peers and staff members.**
   - About computing, we didn't learn much, but I still remember a final exam we had in our last year of high school, about making a calculator in ''Qbasic'', it was a great masterpiece for our level, especially because we all failed, and especially for me because I finally did the homework being at university.

5. **Which degree and university did you choose, and why?**
   - **I graduated in computer science from Kigali Independent University, to pursue my dream of creating computer solutions for people in need. Why this university? firstly teaching level, it is among the first in the region, secondly, she completely fulfilled what I had as computer criteria, the labs, the server room and others, she also had a good English program and a big library, and finally for financial reasons it suited me too.**

6. **Which university courses did you perform best at? How did you rank in your degree?**
   - **The courses in which I really shine are Networking, Hardware and computer system, Web technologies, Calculus 1 and 2, and system Admi.**
   - **I do really well at the University, especially the first two years, and at my degree, I had about 75%.**

7. **Outside of class, what were your interests and where did you spend your time?**
   - **Once a student, I finally have a computer, so most of my free time was spent in the library and the lab (a common room where you can do your own research), with the music always by my side.**

8. **What did you achieve at university that you consider exceptional?**
   - **I created a social media called ''Popmooder'' (https://www.popmooder.com), this is not the biggest project I worked on but really a project a consider exceptional, it's heavy and slow, but I always love to see it like that, no matter new coming language and frameworks this one should remain like that just to keep me remind where I'm from.**

Web engineering experience

1. **What does semantic markup mean?**
   - **Semantic markup is an HTML code writing style in the way to gives more meaning to the content rather than its appearance;**

2. **What is the box model?**
   - **Box model is used to create the design and layout of web pages, is also a container that has multiple properties including borders, margin, padding, and the content itself.**

3. **How would you save a login session?**

   I don't know if I really understood your question, but I decided to answer it in a practical way: in PHP language,

   ```php
   <?php
       Session_start();
       $_SESSION['login_user'] = $username;
   ```

4. **What is your approach to debugging a web page?**
   - **First of all, I have to understand the programming language I'm using, understand the structure of the language, and the structure of my code,**

- **The way to debug on the web side is to go on the browser and press F12, or you right-click and inspect the element, that is the best way of debugging. It's help to go directly to a given element and and see all properties.**

Software engineering experience

1. **What kinds of software projects have you worked on before? Which operating systems, development environments, languages, and databases?**
   - I have already worked on several types of projects, a social network, e-commerce, admin dashboard, software for managing the network company, and different other company website.
   - For the Operating system I'm okay with: LUNIX, APPLE iOS, and WINDOWS MICROSOFT.
   - Dev. Environment: Microsoft Visual Studio, PhpStorm, Xcode, Atom, Android Studio, Sublime,
   - Languages:
     - JavaScript (NodeJs, React, VueJs, I'm leaning actually TypeScript).
     - Php (Laravel).
     - HTML & CSS (Sass and Less).
     - Beginner in Python,
     - SQL
   - Database:
     - MYSQL
     - POSTGRE SQL
     - FIREBASE
     - SQLite

2. **Would you describe yourself as a strong cider? Why?**
   - Yes I can, Because I have enough experience in programming, because I am able to adapt regardless of the company and regardless of the language to use, I always manage to adapt, because I had to work on projects that pushed me to look further and to resource me even more.
   Because I'm also dynamic, professional, patient, endowed with human qualities, concerned about a job well done with a very good knowledge of English, it is with method and passion that I take an interest in my tasks and understand what the company expects from me, Being a mania for computer tools, I take real pleasure in using my know-how to carry out my work and find solutions.

3. **Outline your thoughts on open-source software development. Have you been an open-source maintainer, and can you point to those projects?**
   - **Open-source software it's a way of helping computer users in the way that not everyone can buy a license of software, but generally, it's important to have the license of the software to have full control of the application.**
   I've already had the chance to experiment the license of the editor PHP Storm, it's really interesting, and also, it's a way of supporting the builder of the software.

4. **How extensive is your experience of Python software engineering? How do you test Python applications? Outline the applications that you have led in Python, and your takeaways from that experience.**
    - **My experience with Python: I'm more experience in Python using web frameworks like Django, I've not discovered the other side of Python apart from the web framework Django.**
    - **Application lead in Python: Most of the projects i worked on was either private or local, but it list i have around 3 or 4 project**
    - **My takeaway from Python's experience: is the way of conducting complex statistic calculations, and the way it's easy to make them but also data visualization.**

5. **How extensive is your experience of Golang software engineering? Outline the applications that you have led in Golang.**
    - **Sincerely speaking, I do not have any experience with GO, I've learned the language and it's was somehow easy because it's based on the language C, yet i learned C at University so it's was like a reminder, but for sure i'm not experience in that language.**

6. **Describe your experience of web programming - JavaScript, Typescript, React and CSS in particular.**
    - **JavaScript: As a web developer it's a must to know the JavaScript language and its best framework (React, VueJs, NodeJs), so yes i really master JavaScript and i'm 3 years' experience in it.**
    - **TypeScript: is the newest JavaScript framework so I still not have the chance to work with it through big project, but knowing the basic of Javascript I think I can not get lost with it.**
    - **React and CSS: CSS is one of the languages I've learned when i started programming, mean since 4 years ago, and one I'm the most experienced in. i think HTML ,CSS and JavaScript are the basics of the web development.
      React is the JavaScript most used framework nowadays, Yes I'm experienced in, and I've already work on several projects with React.**

7. **How have you used relational data, such as SQL databases, in your work? How much data model design work have you done? How do you approach this work? What has been unexpected for you in working with structured data models and design?**
    - **Depending to the company I've dealt with different Languages for managing data in a relational database but using SQL was and still is my best experience.**
    - **In my job, because I'm a full-stack developer, I have the role of designing Data models so i can say that i have more than 10 designs, except for my personal projects.**
    - **The way i approach: My first step in designing a database is deciding which aspects of the system are important enough to include in the model, At this stage, don't try to decide how these objects relate to each other. I just try to list them all or I can even write them on a paper. When I have a reasonably complete set of objects, I move on to the next step and decide how these objects will be relate to each other. Some of the objects are major entities that are crucial to giving you the results you want. Other objects are subsidiary to those major entities. Ultimately**

you may decide that some objects don't belong in the model at all. Then create Columns and I give them properties (String, characters, Numbers, Auto-increment, primary key, ...).

- I think data should always be organized, so using the Data Model structure is always advantageous because data must be easy to find, and easy to manage we need to use the structured Data Model.

8. **Describe your experience with micro-service architectures - web front ends, REST APIs, data stores, event processing and other kinds of integration between components. What are the key considerations for architecture, maintainability, and reliability in these large systems?**
   - **Micro-services: is useful for building single-function modules to promote Profitability, flexibility, speed.**
   - **Web front ends: being the part that facilitates the user to interact with the website. I master the main Front End development languages(HTML, CSS, JAVASCRIPT) and I have around 4 years of experience. Every web project you can develop today required you to master these languages and it's where I started to learn.**
   - **My first time dealing with REST API was on a project about an e-commerce platform, the platform was supposed to give the user a space where to buy and renew internet credit, Television subscriptions, networks, and many others because the platform had the Mobile App also, it's was an obligation for us to find the solution for both platforms to communicate, and it's was my first time to work with API. But today we are using API I think in every project we made, REST has made the transfer of data very easy and secured.**
   - **About integration between components: The experience I have is in REACTJs, React is unaware of changes made to the DOM outside of React. It determines updates based on its own internal representation, and if the same DOM nodes are manipulated by another library, React gets confused and has no way to recover. This does not mean it is impossible or even necessarily difficult to combine React with other ways of affecting the DOM, you just have to be mindful of what each is doing. The easiest way to avoid conflicts is to prevent the React component from updating. You can do this by rendering elements that React has no reason to update, like an empty <div />.**
   - **The Key for the architecture: not enough knowledge in the domain but I think about these two: the Interface Segregation, single module.**
   - **Maintainability for me is the way to change or to fix bugs inside a platform, a task that always be difficult especially when the platform is already hosted and in production, that why I most of the time do it being offline. Fortunately today there are platforms that facilitate the monitoring and evolution of projects like Jira. Jira also help in the reliability of a platform since each step is verified and approved before moving on to the next step.**

9. **Outline your thoughts on quality in software development. What practices are most effective in software teams to drive improvements in quality?**

- Quality assurance is an essential part of software development. Without it, chances are your software won't function properly due to possible bugs, glitches, or other issues. Bugs in software development can lead to major consequences for your company's reputation, trust, and its ability to retain users.
- Communicate openly, Use effective project management and communication tools, code simplicity, set clear project guidelines for the team, Encourage knowledge transfer among team members, Make active listening a habit for everyone.

Context

1. Outline your thoughts on the mission of Canonical. What is it about the company's purpose and goals which is most appealing to you? What is risky or unappealing? Are there any elements of the company goals that you are unsure about?
   - First of all I think Canonical is a strong and stable company according to what i read on Wikipedia, it is among the few software development companies with more than 15 years of existence. About your mission, i took my time to read what is written on Mission's page and it's really interesting, I really like this sentence on your page: "Every role at the company involves good judgment against the backdrop of the fast-moving technology landscape. We look for people who find that interesting". So I really think that I would like to have my place within your company and contribute to creating applications and bringing the solution to users' problems.
   - with Canonical i'm sure that it's a stable company, not a start-up with a lack of projects and unstable financially, I'm sure that we will be always having challenges and projects that will push up me to learn more and to do more than yesterday.

2. Who are competitors to Canonical, and what does Canonical need to change to be a more effective competitor?
   - Competitors? I don't think so, but allow me to list one or two great companies where I once applied and passed enough tests with them. IMMAP is one of the biggest I've discovered up to now.
   - What you have to change? I can not right now, and being outside, but maybe once inside i promise to give you feedback about this question.

3. Why do you most want to work for Canonical?
   - Short, because of the stability it may give, because of that feeling of being part of a company that challenges you and creates solutions that are used in worldwide.

4. Which Canonical products and services would you most like to work on?
   - I think every project of products is an opportunity to improve myself so I'm okay to work on every project or product as long as is still a web development.