

1 General experience

Question	??	No	1M	1Y	More
Do you have experience with ROS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with Linux?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with Ubuntu?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with Bash?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with C?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with C++?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with Python?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with Smalltalk/Pharo/Squeak?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with Makefile?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with CMake?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience with GIT?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have experience in long-term team work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Write down here any other experience you find relevant.

2 Concepts

1. What is a program?
2. What programming paradigms do you know?
3. What programming paradigms do you have experienced so far?
4. What do you understand as polymorphism? If you have more than one notion, please categorise them.
5. What do you understand as inheritance?

6. What do you understand as declarativeness?

7. What do you understand as Test driven development?

3 Operative System

1. What is a process?

2. What is a thread?

3. What is process scheduling?

4. Can you name different strategies of process scheduling?

4 Languages

1. What do you understand by Live-Programming

2. Quickly compare static and dynamic typing

3. Quickly define what is a template in C++

4. Quickly define what is a pointer. What operations can we do with pointers?
5. Quickly list the “functional programming” features of Python.
6. Quickly list the object oriented programming features of Python.
7. What kind of language is bash? What is used for?.

5 Version control system

1. What do you understand by versioning
2. Quickly explain how GIT works
3. Quickly explain how GIT allows team working
4. Quickly explain how SVN works
5. Quickly explain how SVN allows team working

6. List any other VCS you have experience.

6 Networking

1. Quickly compare TCP/IP and UDP/IP
2. Quickly define Socket
3. Quickly compare socket and file descriptors

4. Quickly define what is a stream

5. Quickly define what marshall/unmarshall of data

7 Math

1. What are Quaternions?

2. What is the notation of the Euler angular representation?

3. Quickly compare Cartesian and Polar coordinates

4. Quickly explain the idea of coordinate transformation (or system transformation).
5. What are the matrix and vector operations you are familiar with?