

## Technical Interviews Guide

**Overview:** Companies invest considerable resources to identify the best possible match to join their team. Employers often filter the large pool of candidates by their technical fit first, then invest time with the remaining candidates to identify those with the best fit for the work culture. This guide highlights resources for coding interviews, but many of the elements of this type of interview are similar in style to other technical interviews.

The technical interview process may differ from company to company; a general rule is that the larger the company, the more structured the interview process.

### Interacting with Company Representatives and Recruiters

Throughout the school year, Queen's Career Services and the Faculty of Engineering and Applied Science Corporate Relations teams host many employer information sessions and career fairs, both on campus and virtually. Attending these events gives you an opportunity to interact with recruiters, hiring managers, alumni and technical experts and can provide valuable insight about prospective employers. By participating actively, you will become more comfortable talking to professionals and begin to build your professional network. Many of these companies are hiring for internship and post-graduation roles.

#### Success Tactics

- **Prepare in advance.** Research companies of interest and prepare insightful questions to demonstrate a genuine interest in the kind of work they do.
- **Participate.** Listen actively and ask questions to demonstrate interest and build rapport.
- **Network.** Use [LinkedIn](#) or the [Queen's Global Engineering Network](#) to connect with a recruiter, alumni or company representative. Consider reaching out to current or past employees from a desired company to set up a casual coffee/video/phone chat.
- **Be courteous.** Alumni and company representatives can be powerful nodes in your professional network. Your recruiter may become your first point of contact throughout the interview process later. Show your appreciation by responding to their emails in a timely manner. Send thank you emails to any contacts you made.

### Technical/Aptitude Test and Application Package

Some companies may require the completion of an in-person or online technical/aptitude test alongside an application package.

#### Success Tactics

- **Prepare.** Create a tailored resume and cover letter using the company guidelines. Read online forms that describe the types of questions on the aptitude test.
- **Practice.** Complete some practice aptitude tests or go to testing sessions for similar companies.

## Phone/Video Interviews – Technical/Coding

You may be required to write code (or solve a technical problem) during these screening sessions, however some companies may additionally do first-round non-technical interviews over the phone as well. For many coding interviews, the coding language is not important. They are testing your problem solving and competence with coding.

### Success Tactics

- **Prepare.** Book and private, professional looking room where you won't be disturbed. Familiarize yourself with the communication technology and test to ensure audio and video are working. Have water, notepad, clock, cover letter, resume and references all accessible.
- **Practice.** See the included interview prep resources at the end of this guide.
- **Engage.**
  - Be professional and engaged in the interview. And be yourself!
  - Dress smartly and be professional – as if it were an in-person interview
  - Maintain eye contact with the camera
  - To demonstrate your attention to details and to fully digest the problem, start by asking clarifying questions such as:
    - “Will this array only contain integers?”
    - “Will there be any negative values in the dataset?”
- **Describe.** Ensure that you use descriptive variable names as well as talk (think aloud) through your code using formal language for example:
  - “The minimize\_array functions call returns 0.5, which is assigned to the variable min\_value.”
- **Understand.** Make sure you fully understand the space and time complexities of your implemented solution. You will almost always be asked how you can make your solution more efficient.
- **Be Resilient.** If you get stuck on the problem, tell the interviewer exactly what you have tried and why that does not work. Remember that you are primarily being testing on your problem-solving process; you can turn getting stuck into an excellent opportunity to demonstrate your resiliency.
- **Follow up.** Within 24 hours of your interview, send a short, genuine email to the people who interviewed you, thanking them for their time and the insights and information they provided. You can send individual emails to different interviewers or choose to send a general email to all the people you interacted with at the company, both are professional.

## On-Site Interviews

The on-site interviews will explore your problem-solving ability and cultural fit with the company.

### Success Tactics

- **Arrive Early.** Aim to arrive early to give yourself time for unexpected delays and to show that you are organized and respectful of the interview team's time.
- **Arrive Prepared.** Bring notepad, water, cover letter, resume and references.
- **Rapport.** People remember you by how you make them feel; aim to be personal and courteous throughout the coding challenge.
- **Reflect.** Post-interview, reflect on how you performed and record what you learned. Even if you are not successful securing the position, valuable experience can be captured for next time.

- **Follow up.** Within 24 hours of your interview, send a short, genuine email to the people who interviewed you, thanking them for their time and the insights and information they provided. You can send individual emails to different interviewers or choose to send a general email to all the people you interacted with at the company, both are professional.

### Technical Interview Preparation Resources

- [Cracking the Coding Interview](#) by Gayle Laakmann McDowell
- [HackerRank](#) - technical Interviewing and resource platform
- [Learn to Code with Me](#) – A Beginner’s Guide to Technical Interviews
- [Interview Cake](#) - Free email course for programming interviews
- [Udemy](#) – Coding Interview Bootcamp: Algorithms + Data Structures
- [Coursera](#) - Mastering the Software Engineering Interview
- [Interview Camp](#) - Online Bootcamp for Coding Interviews
- [LeetCode](#) – Technical Interview Training
- [GitHub](#) - Awesome interview practice questions
- [Pramp](#) – Peer-to-peer interview preparation site
- [Java67](#) - Top 75 Programming Interview Questions Answers to Crack Any Coding Job Interview
- [The Balance Careers](#) – Top Technical Interview Questions
- [The Simple Programmer](#) – To 50 Programming Interview Questions