

GRACE HOPPER
CELEBRATION



Surviving the Technical Interview

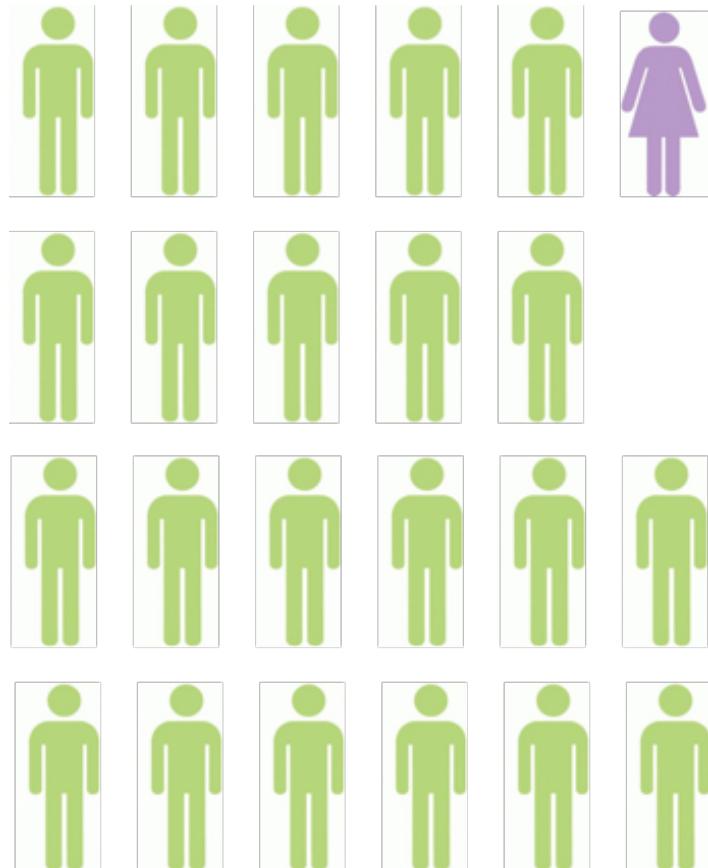
Jenn Lee | @PhoenixJenn



Association for
Computing Machinery

#GHC17

New Hire Class Winter '17



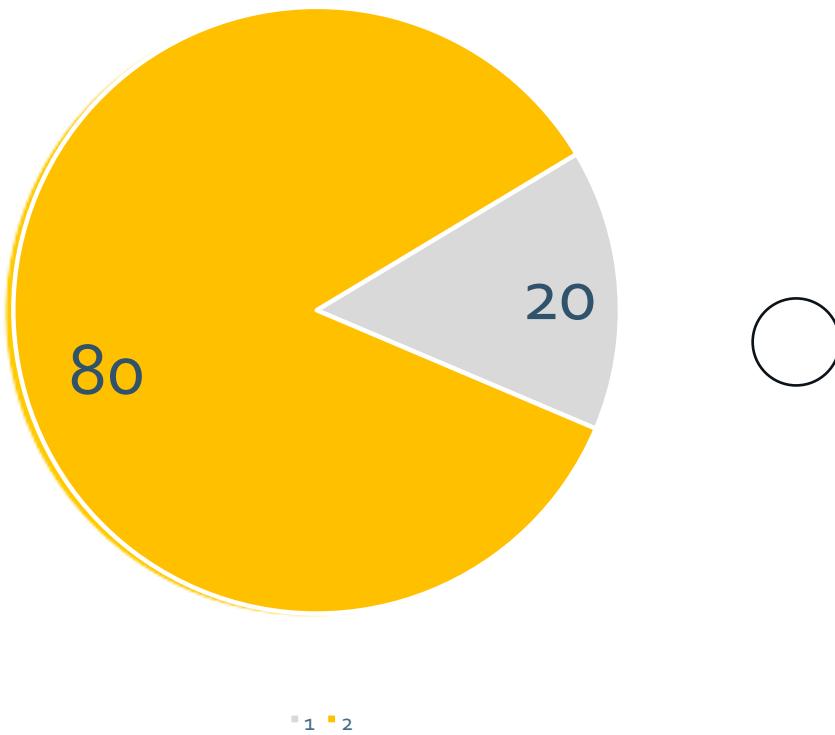


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Women in Technical Roles

Sample #'s

- Amazon 27%
- Apple 23%
- Google 20%
- Microsoft 18%
- Facebook 19%
- Twitter 15%



<https://www.recode.net/2017/8/7/16108122/major-tech-companies-silicon-valley-diversity-women-tech-engineer>

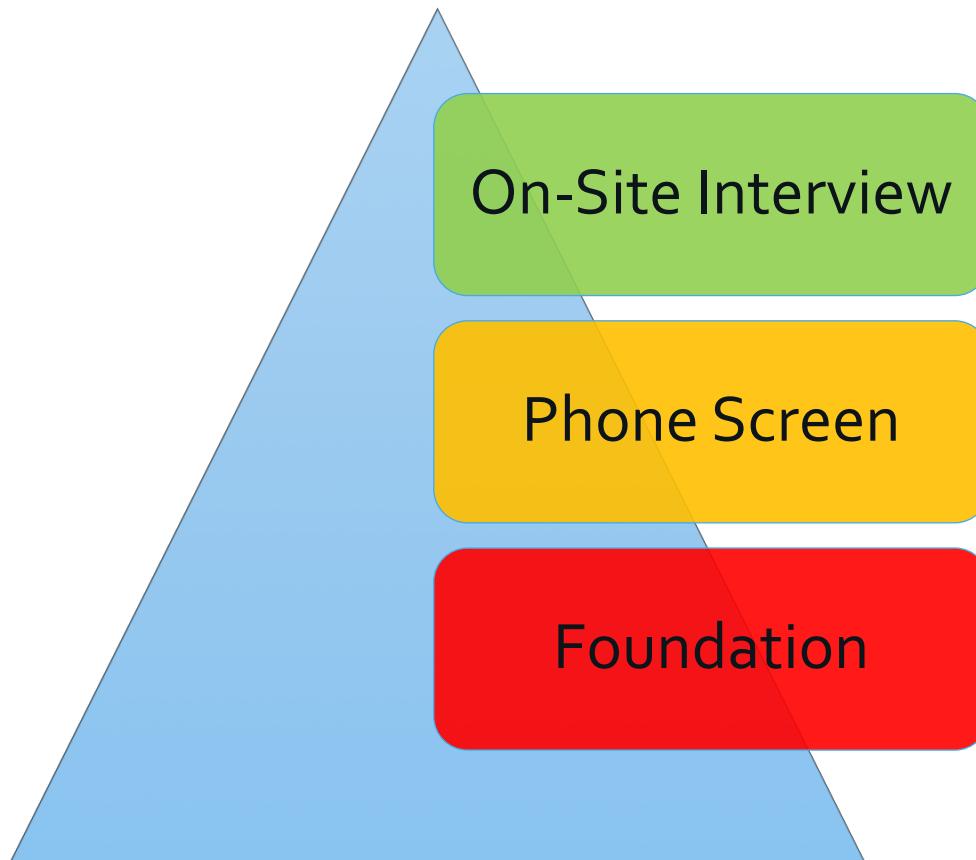
My Research

- Interview the Interviewers
- Interview recently hired candidates
- Broaden the search
 - Interview candidates who have been on interviews
 - Interview technical recruiters
 - Interview friends who interview at other companies
- Online research (blogs, videos, ted talks)
- Books

Real Feedback from Real Interviewers

- Weak foundation
- Bad fit for the organization
- No interest in the organization
- Talks too much
- No questions
- Unable to articulate experience
- Using 'we' vs 'I' when describing projects
- Lack of confidence
- Overconfident

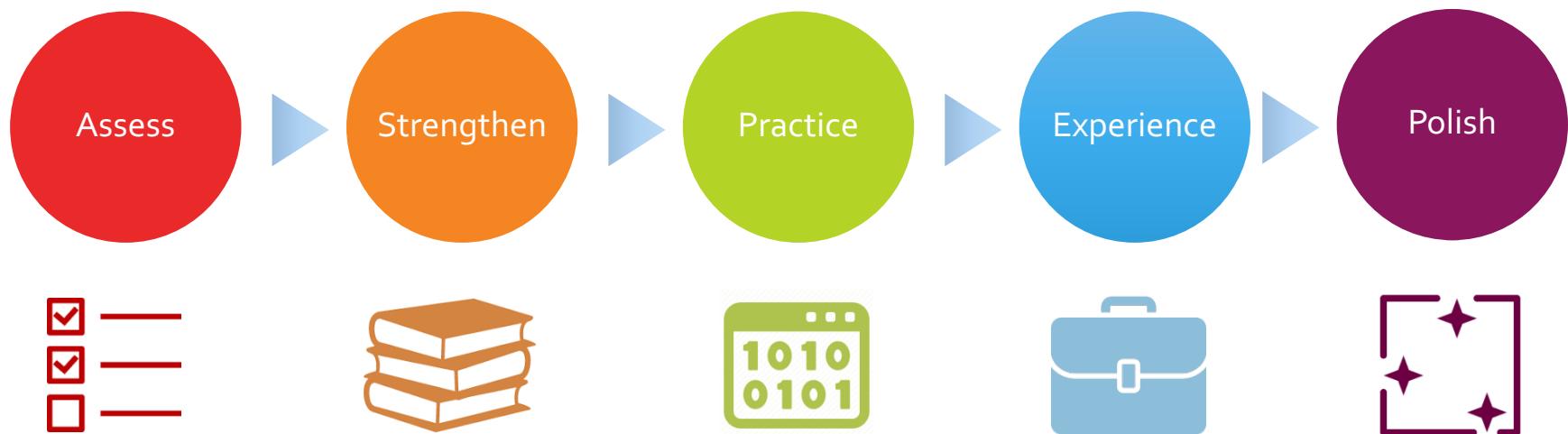
The 3 Step Process



Foundational Knowledge

A marathon is hundreds of miles.
The finish is the last 26.2

Step 1: The Foundation



Technical Knowledge

Know what you DON'T know!



Data Structures

Linked lists
Binary trees
Trees/Hierarchies
Stacks
Queues
Vectors/Arrays
Hash tables

Design

Design Patterns
System Design
Sequence Diagrams

Algorithms

Simple Search
Binary Search
Breadth First Search
Depth First Search
Sorting
Recursion
Quick Sort
Merge sort
K-nearest neighbors
Dynamic Programming

Scalability

load balancing
caching

OO Concepts

Polymorphism
Encapsulation
Inheritance
Abstraction
Singleton, Factory, etc
SOLID principles
Interfaces

Performance

Memory Management
Run Times/Big O Notation
Refactoring

Database

DDL
DML/SQL

Technical Knowledge

Work on Areas for Improvement!

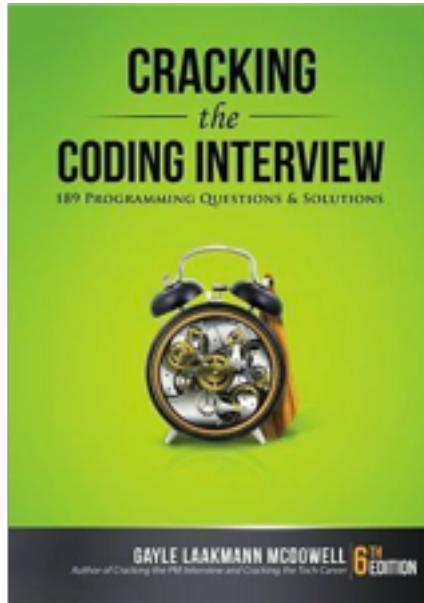
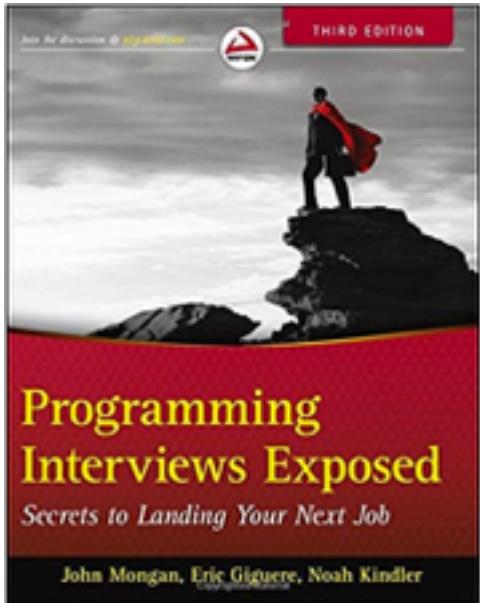


- **Online Courses**
- **Books**
- **Bootcamps**
- **Meetup Classes/Workshops/Info Sessions**

Resources at end of presentation...

Technical Knowledge

Test Yourself!



- topcoder.com
- hackerrank.com
- thecodeplayer.com
- codewars.com
- programmr.com
- code.google.com/codejam

Technical Knowledge

Level Up with Experience!



- Project Showcase (website, Github, blog)
- Real company experience with internships or consulting
- Hackathons & Coding Competitions
- Participate in the Open Source community
- Get & Give Code Reviews
- Meetups & Organizations

Polish Your Presentation

Practice Whiteboarding!



The Problem

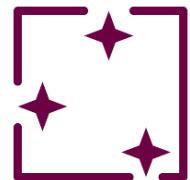
Pseudo Code

Real Code

Test

Polish Your Presentation

Mock Interview



Real Technical Interviews

- interviewing.io
- gainlo.co
- LeetCode.com
- Interviewbit.com
- HackerRank.com
- CoderByte.com

The screenshot shows a laptop screen displaying the Electric Panda interface. The main area is a code editor with the following JavaScript code:

```
Electric Panda | Interviewing.io
Node.js v6.9.1
You can modify this shell in real time.
It's a sandbox that works exactly like a native shell.

function wordDistance(text, w1, w2) {
    let minDifference = Infinity
    text = text.split(' ')
    for(let i = 0; i < text.length; i++) {
        if(text[i] === w1) occurrences[w1] = i
        if(text[i] === w2) occurrences[w2] = i
    }
    for(let i = 0; i < text.length - 1; i++) {
        let diff = Math.abs(occurrences[w1] - occurrences[w2])
        if(diff < minDifference) minDifference = diff
    }
    return minDifference - 1
}

var text1 = "the quick brown fox jumps over the lazy dog"
console.log(wordDistance(text1))
```

Below the code editor is a keyboard. To the right of the keyboard, there is a sidebar with various language options: C, C++, CoffeeScript, Go, Erlang, Java, Haskell, JavaScript, MySQL, PHP, Objective-C, Perl, Python, R, Scala, Visual Basic, Plain Text, Python 3, Ruby, and Swift. At the bottom right of the sidebar is a "Code" button.

Annotations on the left side of the screenshot point to specific features:

- A rocket ship icon points to the "Run" button at the top of the code editor.
- A document icon points to the language selection sidebar.
- A drawing icon points to the "Draw" button at the bottom right of the sidebar.

Annotations on the right side of the screenshot point to features on the right side of the interface:

- A microphone icon points to the "built-in voice" button.
- A person icon with a mask points to the "unmask at the end if you want" button.

At the bottom center of the screenshot, it says "Coding environment powered by [CoderPad](#)".

Step 2: The Phone Screen



<http://3.bp.blogspot.com/-AjzacXLU7ZM/T8PWkfp2awl/AAAAAAAAMOo/qoLR7SA-ud8/s1600/ishot-234.jpg>

The Technical Phone Screen

What to Expect



- Research the Company
- Understand the Job
- Know Yourself
- Have a LONG list of questions



<https://rahulmittal.files.wordpress.com/2014/03/womantalkingonphone-660x427.jpg>

http://img-aws.ehowcdn.com/340x221p/photos.demandstudios.com/getty/article/41/198/89880707.jpg

Step 3: The On-Site Technical Interview



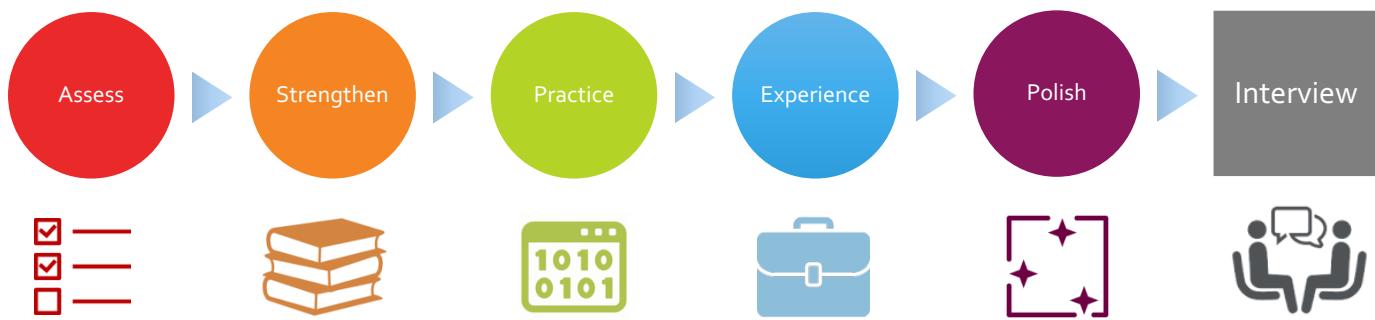


Things to Remember

Whiteboarding 101

- Repeat the problem.
 - Clarify constraints & assumptions.
 - Write pseudo code (*& ask if you're on the right track!*)
 - Write code (*out loud, ask for help if needed*). #MSIFW
 - Test.
 - Time permitting: address edge cases, improve efficiency, etc.
-
- **Ask Questions!**
 - **Watch out for scope creep!**

The Path To Survival



Resources

<https://github.com/PhoenixJenn/GHC2017>

-  [LinkedIn.com/in/phoenixJenn](https://www.linkedin.com/in/phoenixjenn)
-  [@phoenixjenn](https://twitter.com/phoenixjenn)
-  phoenixjenn@gmail.com

GRACE HOPPER CELEBRATION



Thank you

FEEDBACK? RATE AND REVIEW THE SESSION ON OUR MOBILE APP

Download the GHC 17 app at <http://bit.ly/ghc17app> or search GHC 2017 in the app store



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