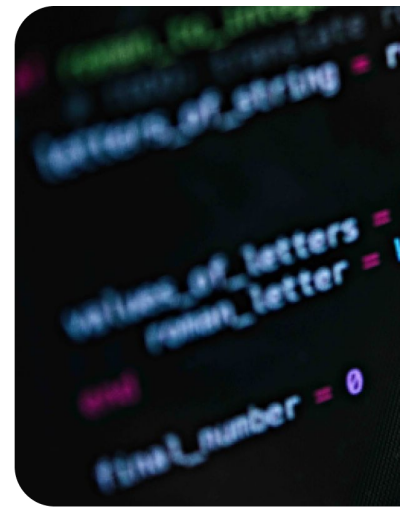


Technical Interviews

Getting prepared



Outline

- What should I expect?
- What kind of tests are there?
- How can I get ready?



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What should I expect?



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CATALIN PIT



@catalinmpit

Tech interview:

- Dynamic Programming
- Dijkstra Algorithm
- Linked Lists, Stacks, Queues, Binary Trees
- 10 hard LeetCode questions

Day-to-day job:

- Fix typo in README
- Center the form
- Fix the Twitter icon link
- Add secret_key



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What companies **are** looking for in a junior

- Curiosity and passion for the field and latest trends
- Willingness to learn and ability to ask questions
- Strong knowledge of basic concepts
- See your personality and team-fit



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What companies **aren't** looking for in a junior

- Stating you know things well when you don't
- Too much pride to not ask questions
- Stuck in their normal routines/habits
- Stubbornness to solve problems a particular way



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The good news

They don't expect you to know
all the answers



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What kind of tests are there?



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1. Home Assignments

- Be clear of the task / tests / timeline
- Get started ASAP
- Don't guess, ask questions if confused
- Test and refactor



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Find out why [#Drupal8](#)'s minimum PHP version has increased to 5.5.9 [ow.ly/Pqin9](#) @webchick

3:31 PM - 10 Jul 2015

↩️ ↻ 22 ★ 7



Follow

Earlybird pricing for [#DrupalCon](#) Barcelona closes Friday [ow.ly/PndrE](#) 23:59 Barcelona local time (UTC +2)

11:31 AM - 9 Jul 2015

↩️ ↻ 9 ★



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Don't forget - earlybird ticket pricing for DrupalCon Barcelona ends this Friday: [ow.ly/Pje1g](#)

12:50 PM - 8 Jul 2015

↩️ ↻ 5 ★ 3

Ex. Write an app that allows you to buy cinema tickets

The following figure shows the start page of the application.

The screenshot shows the Kinokasse website interface. It features a navigation bar with a search bar containing 'http://kinokasse.de'. Below the navigation bar, there are three film listings, each with a table of showtimes and prices for the days of the week (Mo to So).

Film	Mo	Di	Mi	Do	Fr	Sa	So
Der Name der Rose	17.00 20.00	17.00	16.00 19.00 22.00	16.00 19.00	17.00 20.00 23.00	17.00 20.00	15.00 20.00
Pumuckl	14.00	17.00	14.00	14.00	17.00	14.00	15.00
Der Schuh des Königs	19.15 21.00	19.15 21.00	16.00 19.00 22.00	17.00	17.20 20.20 23.20	17.00 20.20	15.00 20.00

All showings of a film are displayed in this format. Within a film, the user can click on one of the times to select the film, the day of the week and the time. This takes the user to the occupancy plan, where he can select one or more seats.

The screenshot shows the occupancy plan for the film 'Pumuckl'. It displays a grid of seats arranged in 6 rows and 16 columns. Seats are represented by squares. Some squares are gray, indicating they are already occupied. Two seats in row 4 are marked with a checkmark, indicating they have been selected by the user. At the bottom of the grid, the total sum is displayed as 'Gesamtsumme: 14,00 EUR' and a 'Buchten' (Book) button is visible.

Places that are already occupied are displayed in gray in the occupancy plan and cannot be selected. All free places can be marked by the user. Each time the number of seats marked by the user changes, the current total sum is recalculated and displayed. If the user has selected at least one seat, the Book button is activated. From there, the user accesses the payment dialog.

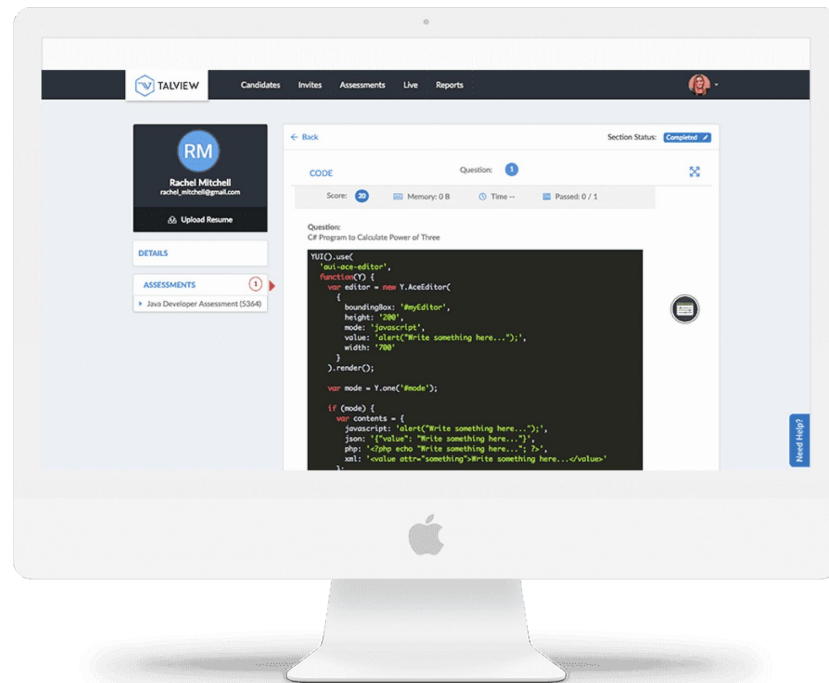


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2. Online Tests

- Read instructions carefully
- Plan time/place accordingly
- Try to complete as much as possible
- Follow up afterwards

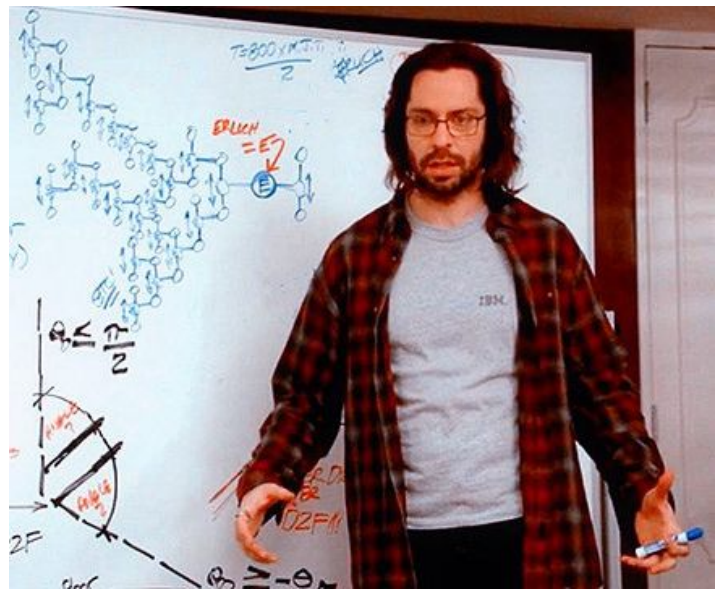
Leet Code Example



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3. Livecode / Whiteboard

- A challenge to solve while people watching
- Explain each step of the coding challenge.
- Don't be scared of making a mistake
- Don't be scared of asking questions



Ex. FizzBuzz

Specs

Write a method `fizz_buzz` which takes a `number` as an argument, and return an array of `number` elements from 1 to `number`, but replaces some of them according to these rules:

- If the number is divisible by 3, then replace it by 'Fizz'
- If the number is divisible by 5, then replace it by 'Buzz'
- If the number is divisible by both 3 and 5, then replace it by 'FizzBuzz'

e.g.

```
fizz_buzz(7)
# => [1, 2, 'Fizz', 4, 'Buzz', 'Fizz', 7]
```



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3. Explanations

- Explain a particular concept / framework
- Gauging your comprehension
- Explain when you've used it in a project
- Try to answer / Be honest

What is clustering?

What is let keyword in JavaScript?

Explain what is Ruby on Rails?

What is negative index in Python?

What is a class?

What is a Ruby gem?

What do you understand by selection bias?



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4. Mathematics

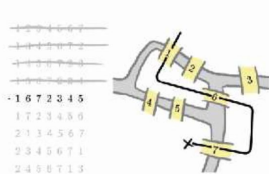
- Only for data jobs
- Testing for competency with statistics
- Answer in same way to pair programming
- Some topics: Conditional Probabilities, Bayes Theorem, Descriptive Statistics, Central Limit Theorem, Law of Large Numbers



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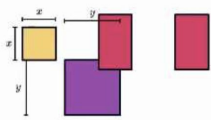
BRILLIANT

Solve classic puzzles



Computer Science Fundamentals

Learn visual proofs of algebraic identities

$$(x + y)(x + y) = x^2 + y^2 + xy + xy$$


Algebra Fundamentals

Construct a neural network to recognize handwritten digits

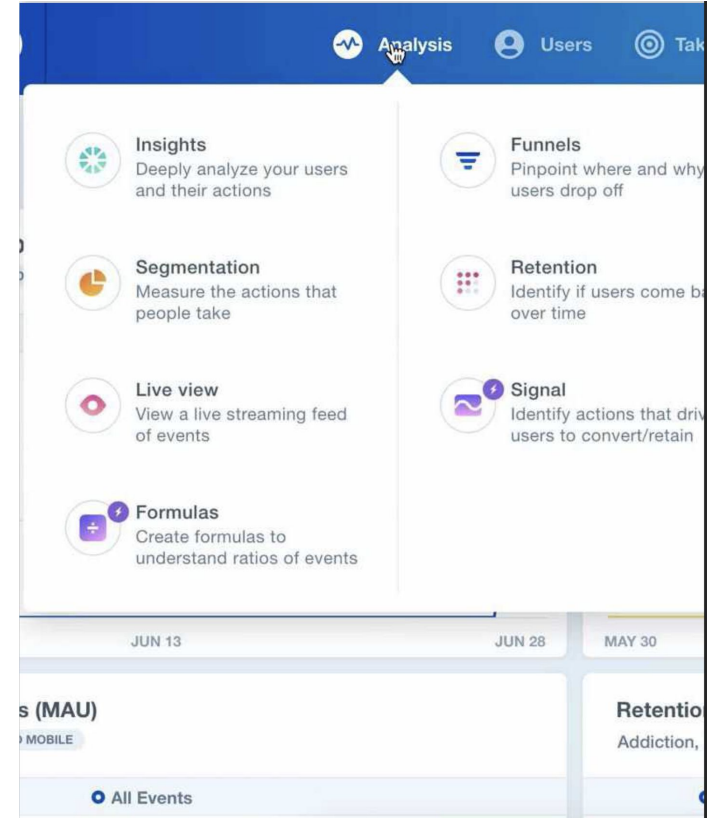
Introduction to Neural Networks

Write an algorithm to look up a phone number

Algorithm Fundamentals

5. Product

- Often for Product & Data interviews
- Come up with a hypothetical product
- Testing thinking process with product data
- Describe the key metrics you would track



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How can I get ready?



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Get The Basics:

Interview Cake

- For **Backend** and **Fullstack**
- Great **articles** on cracking the interview
- Useful **glossary** of potential concepts
- Free 7-Day **Email course**
- Examples of **questions**



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Practice:

HackerRank

- For **Backend & Data**
- Fantastic **interview prep** course
- Useful **video tutorials** on interviews
- Huge range of **practice questions**
- Often used by **companies** during live challenges
- **Compete** in competitions

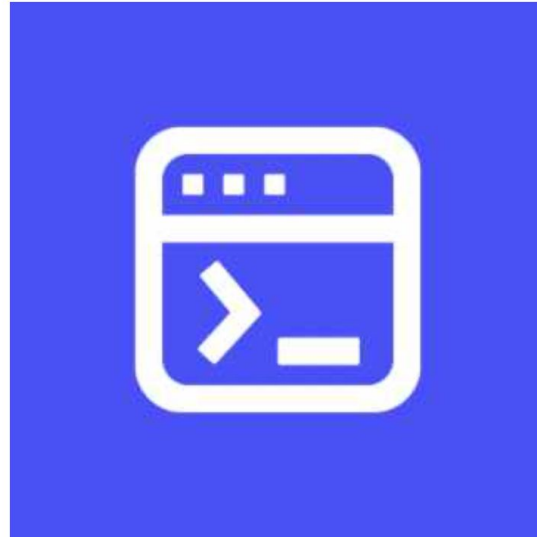


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Practice:

Educative

- For **Frontend & Data**
- **Frontend** track with real life questions
- **Python** track with real life questions
- Also has other **courses** (see future learning)



Practice:

Interview Query

- For **Data**
- Receive regular **data science questions**
- Get **take-home challenges** to practice
- Focus on **relevant questions** for your desired job



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Practice:

Brilliant.org

- For **Data**
- Solve **math challenges** regularly
- Great to practice **before** interviews



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Watch Interviews:

Interviewing.io

- Watch **live, real-life** interviews
- Top **companies**: Google, Amazon, Shopify, etc
- Learn how **others** approach challenges



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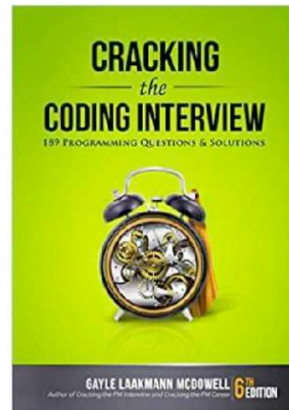
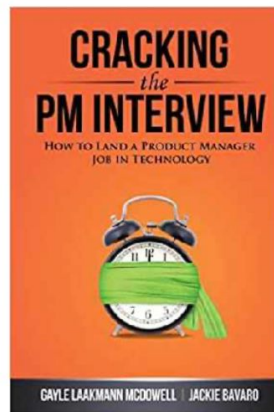
Read: **Cracking The Interview**

- Go-to book for **PMs** and **developers**
- Behavioral, estimation, product, case **questions**
- Discusses **variations** in the role
- Top companies: Google, Facebook, Microsoft...
- Same publish has one on the **coding** interview...

[Amazon Link](#)



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