SOFTWARE ENGINEERING AT AMAZON

Created by Ivan du Toit / @anilihst
WHO AM I?

You two years from now!

Working in the UX team at Amazon
WHAT AM I DOING HERE

- What is software engineering?
- Soft skills in software engineering
- Software engineering at Amazon
- The industry and interviewing
- Q&A
WHAT IS SOFTWARE ENGINEERING?

Methodology?

Process?

Knowledge?

Best Practice?

???
WHAT IS SOFTWARE ENGINEERING?

It is about predictability!
WHAT IS SOFTWARE ENGINEERING?

Predicatable time
Predicatable costs
Predicatable quality
All of these are still trade-offs
THIS SOUNDS SO BORING!

Can you guys keep a secret?
We are doing this for us.
A QUICK BREAK FROM THE SCHEDULED PROGRAMMING

OR HOW I THINK ABOUT KNOWLEDGE.

You don't have to be a rockstar!?!?

Understand the underlying principle

Don't be afraid to change your thinking as you learn more
HOW DO WE GET TO THIS UTOPIA

Step 1: Attend this lecture
Step 2: ???
Step 3: Profit
HOW TO BE A BETTER SOFTWARE ENGINEER

Listen and learn from all the things taught in this class!!!

Determine the base principles and make them your own

Continue to add to your tool box.

Use the most applicable tool in your situation.
"We now know that 35% of the variation in a team’s performance can be accounted for simply by the number of face-to-face exchanges among team members." - Prof. Alex `Sandy’ Pentland
IMPORTANCE OF COMMUNICATION
IMPROVING TEAM COMMUNICATION.
IMPROVING INTER-TEAM COMMUNICATION.
WRITTEN COMMUNICATION.
COOL STORY BRO BUT DOES THIS WORK?
WORKING BACKWARDS

1. Start by writing the Press Release
2. Write a Frequently Asked Questions document
3. Define the customer experience
4. Write the User Manual

Why?
HOW DO YOU KEEP ACCELERATING?

Keep teams small with strong ownership (Micro Services)

Supply strong tooling around inter-team integration

Service contracts

Service contract client generation
CONFIGURATION MANAGEMENT

Cattle not pets

Keep as much config in source as possible

Make dev as close to prod as possible

Use dev/ops
WHAT DID WE LEARN

- The main goal is predicatibility.
- There is no silver bullet
- The impact of communication should not be ignored
- We have to think about and adapt all these tools to our situation
- Never stop learning or asking questions
HOW TO GET JOB

You don't want to be this guy
WHAT ARE TECHNICAL INTERVIEWS LIKE?

They are nothing like normal programming
You will fail or do worse than you would if you don't prepare
I know it sucks but this is the reality
HOW TO PREPARE

Algorithms and data structures
Algorithms and data structures
Algorithms and data structures
Practise
Practise IRL
THE PROCESS AT AMAZON

1. Simple coding challenge
2. Phone screens
3. 5-7 on-site interviews
WHAT WILL THE INTERVIEWERS BE LOOKING FOR?

- Problem solving
- Coding
- Communication
- Cultural fit
- Personality
- Growth Potential
TIPS

TALK

State or validate your assumptions

Stuck? Try a different approach

Any solution is better than no solution
ARE YOU GOING TO PREPARE?

How?

When?

Do it again!
FINALLY

Don't try to be a hotshot

You can do this