

# Real World Software Engineering

Insights from the trenches on entering and  
succeeding in the software industry

# About Alex



UIUC undergrad

Started in the industry in 2007 as  
Software Eng

EA / Microsoft until 2012

Quit grad school

Freckle co-founder / CTO. Part of  
YCombinator. 25+ million students  
served

Part of Renaissance Learning as of  
2019



# Agenda

What you're getting  
yourself into

- Entering the industry
  - Understanding employers
  - Standing out
  - Interviewing
- Thriving in the industry
  - Simple formula for success
  - Career paths
- Q&A / AMA
  - Save questions for the end!



# Why me?

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Struggled with landing my first job, 0 connections in the US

Experienced both Big Corp and startup progression

Screened thousands of engineering candidates at Freckle

# Entering the industry

# Disclaimer

A lot of these opinions are around the world of web and mobile-based products. Think Dropbox, AirBnb, Uber, Slack, Amazon.com, Reddit etc.

YMMV if going into robotics, aerospace, automotive, embedded, HFT..

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# First step in your career

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Land a job that:

1. Allows you to perfect your craft and gain quality experience
2. Gives you a network of future allies
3. Provides fair compensation
4. (optionally) Provides a brand name

# Two paths

Startups vs Big Corp





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Startups vs Big Corp

Startups:

- Lots of work to be done
- More pressure
- Worse mentorship & mgmt
- All around gamble
- More opportunity for growth
- Adventure



# Two paths

Startups vs Big Corp

Big Corp:

- Lots of meetings about work to be done
- Slower career growth
- Very, very small responsibility
- Brand name
- (probably) Better mentorship
- Safer
- Work-life balance

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# Exhibit A: What employers are looking for

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**Technical:** can you consistently ship complex software on time with minimal defects, minimal debt, that meets specification and that delivers value to real users?

**Process:** can you do that as part of a collaborative team (PM, UX, sales, managers, execs, users et al) that iterates together on a regular cadence?

**Soft skills:** are you a pleasant, positive, empathetic, enthusiastic, high-energy professional? Are you fun to be around? Can you build trust with those around you?

# How do I stand out?

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Demonstrate as much as you can of Exhibit A

# How do I stand out?

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Demonstrate as much as you can of Exhibit A

Great:

- Jobs & Internships
- Real projects you shipped online
- Personal connections

# How do I stand out?

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Demonstrate as much as you can of Exhibit A

Meh:

- Top university
- Incredible school grades
- Github repos
- Minor OSS contributions

# Resume?

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Less is more, keep it to one page

Highlight whatever is relevant to Exhibit A

Life hack: with startups, feel free to email people directly after you submitted a resume



# Where do I look for jobs?

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- Personal connections, alumni
- LinkedIn
- AngelList
- Hired.com
- TripleByte.com
- Remoteok.io
- Twitter
- HackerNews Who's Hiring / Who's Looking To Be Hired
- Join a specialized Slack, for example Reactiflux.com

# The elephant in the room: interviews

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Nobody knows what they're doing

99% of the time interviews have no relation to the real job

Q: what do you do about it?

A: interviewing is a separate skillset. You can immediately forget it after you're hired. Until next time, at least

Plenty of books and online resources on how to master this

# Competing offers

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Try to have as many offers as possible on the table to get companies to compete over you.

# Common Concerns

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But Alex, I don't have a degree from \$famous\_university!

# Common Concerns

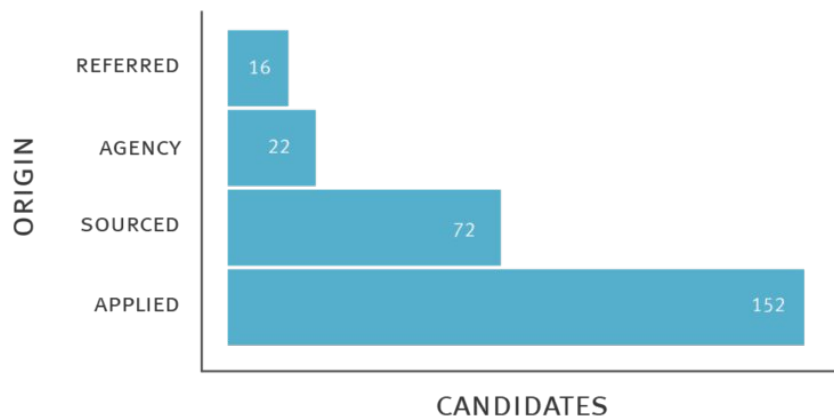
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But Alex, the job application makes the role sound very serious and scary.. I don't know if I'm ready !

# Common Concerns

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But Alex, I have been applying for months!



<https://www.lever.co/recruiting-resources/articles/recruitment-process/>

Once you're in



# The timeless triad

Skill + Relationships +  
Career Curation

Step 1: You must be good  
at what you do.

Step 2: People must like  
working with you.

Step 3: Curate your career

Step 4: Success.

That's it.

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# How do I optimize my career if I'm hungry for growth?

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Consider switching jobs every 2-4 years, or use an external offer for negotiating a salary bump

The industry tends to under-promote as of 2020: people change companies instead of roles in order to grow

But, also OK if max career growth is not a priority

# Wrap up

Understand what employers want

Be valuable

Remember about the power of skill + relationships

Embrace being the curator of your own journey

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**Thank you!**

# We're hiring

Would love to have you  
with us

[careers.smartrecruiters.com/Renaissance](https://careers.smartrecruiters.com/Renaissance)



Q&A

# Appendix

# What does an interview at Freckle look like?

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1. Initial chat about work history, dig into details of past projects and contributions, sanity check
2. Take home project: implement web application based on specifications
3. Pair-programming session: extend web application pairing with a Freckle developer
4. Onsite interview: behavioral, DB design, web app architecture, web fundamentals



# What technology do I learn?

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Doesn't matter TOO much. Get the most coverage. Real depth in 1 stack beats breadth in 20 stacks.

Web Dev in 2020:

- Full-stack Javascript + Typescript + React
- Postgres
- Deploy and host to AWS with Docker through Terraform or CloudFormation
- automate CI testing.

# Hiring is Broken

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<http://blog.alinelerner.com/ive-been-an-engineer-and-a-recruiter-hiring-is-broken-heres-why-and-heres-what-it-should-be-like-instead/>

# What makes a great job?

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<https://www.palomamedina.com/biceps>

<https://www.mindtools.com/pages/article/autonomy-mastery-purpose.htm>

# The two tracks

Individual Contributor  
(IC) vs Manager



# The two tracks

Individual Contributor  
(IC) vs Manager

IC:

- Always up to speed with the latest tech
- Progressively more scope and complexity
- Mentor more junior staff
- Pinnacle: architect, distinguished engineer, technical fellow

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# The two tracks

Individual Contributor  
(IC) vs Manager

Manager:

- A people job
- Coach
  - Hiring / firing
  - Team performance
- Building relationships and alliances with other managers
- Eventually a VP or C-level role

