Keeping Up your Technical Skills as a Manager
without annoying your team(s)

Kathleen Vignos | @kathleencodes | #velocityconf
2014
**2015**

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Learn how we count contributions.
2016

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Learn how we count contributions.
Who cares?
The benefit of having a highly competent boss is easily the largest positive influence on a typical worker’s level of job satisfaction.

-- study by Benjamin Artz, Amanda Goodall, and Andrew J. Oswald
Fundamental shifts

Jenkins
Puppet

REST API
AWS

React.js
Why it’s hard for managers

Problems with hands-on
- Lack of maker time
- Risk blocking team
- Credibility
- Loss of team autonomy

Leadership priorities
- Lack of prior knowledge
- Strategic focus
- Soft skills development

Changes in tech trends
- Industry moves fast
- Too many options
- Want guaranteed ROI
- Competing priorities
Choose growth

Avoid becoming irrelevant
Good morning, Kathleen.

“No one saves us but ourselves. No one can and no one may. We ourselves must walk the path.”

12 to do
- GraphQL
- React.js
- Machine Learning (take Udacity ML nanodegree course)
- Presto queries in Hadoop
- Cryptocurrency
- Blockchain
- GCP/AWS/Azure tradeoffs
- Serverless APIs, lambda functions
- IoT, wearables, Alexa skills
- Bots
- Kubernetes, ELK stack
- Docker, containers

New Todo
Get creative with time

- Book daily/weekly work calendar slots
- Book daily/weekly personal calendar slots
- Schedule a class and invite others
- Commit to giving a talk (brown bag, conference)
- Prioritize workshops over presentations
- Capitalize on sporadic nights and/or weekends
- Meetups
- Company hackathons
Idea Blitzkrieg
1. Understand the systems and people you manage

- Read all design docs
- Code review (non blocking)
- Set up the dev environment, build, deploy
- Pair program, fix bugs
- Build prototypes on local
- Encourage team brown bags for new learnings
- Encourage code walkthroughs
- Remove/delete dead code
2. Automate management tasks

- Set up system health dashboards
- Set up queries for success metrics
- Write scripts (Python, Google App Scripts)
- Build chrome extensions (ex: recruiting)
- Bots (Slack, Alexa skills, IFTTT)
- Build interview questions, solutions, rubrics
- Third-party software integrations (Jira/Tableau)
3. Work on side projects

- Give a conference talk or brown bag about a side project
- Participate in hackathons (company or outside)
- Contribute to open source
- Build a new interview code challenge: grade it, solve it
- Volunteer at code camps and meetups
- Tutor your kids, niece, friends’ kids
4. Keep up with trends

- Attend conferences ✓
- Attend tutorials/workshops ✓
- Take a class (set a goal, tell someone)
- Read a new technology book
- Tech blogs, podcasts
- Tool demos from third party providers
- Slack channels (Rands #architecture, #tech-chat)
5. Customize your career path

- Move from specialist to generalist
- Take on a project in unfamiliar territory
- Manage a team in a new technical domain
- Consider the IC/manager pendulum
- Take a learning sabbatical
- Alternate between startups and large companies
- Try reciprocal mentoring relationships
Taking care of your future
Overcome current or future bias
However, the **engineering director** is responsible for their organization’s overall **technical competence**, guiding and growing that competence in the whole team as necessary via training and hiring.

They should have a **strong technical background** and spend some of their time researching new technologies and staying abreast of trends in the tech industry. They will be expected to help debug and triage critical systems, and should understand the systems they oversee well enough to perform code reviews and help research problems as needed. They should **contribute to the architecture and design efforts** primarily by serving as the technically-savvy voice that asks business and product questions of the engineers on their teams, ensuring that the code we are writing matches the product and business needs and **can scale appropriately** as those needs grow.

-- Rent the Runway **engineering ladder**
Preferred qualifications: Master’s degree in Computer Science or a relevant field; Experience developing high-growth, consumer/user-centric technology platforms; Strong engineering leadership and ability to attract top talent, motivate people, instill accountability and get best out of the team; Ability to contribute to architecture/design discussions and make sound technical decisions; Ability to set and drive the “big picture” strategy while also having the capability to provide detailed technical guidance to the team, enabling them to execute more effectively and deliver products on time and within budget.

--- Google Job Description, Director, Engineering, Chrome Web Platform
Maintain interview skills

"Design a distributed key/value store
What’s the search complexity of...
Data structures
Implement an algorithm using MapReduce
UNIX internals
When’s the last time you pushed to github?"

-- Google engineering manager questions as posted on Glassdoor.com
Stay relevant
What will you learn next?

#managerswhotech
Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Photographs by Unsplash
Thanks!

@kathleencodes
#managerswhotech
#velocityconf

Slides:
Github: https://github.com/kvignos/managerswhotech