Badges
skills driven
Achieved by demonstrating in real work
Mentor decides
There is a core set of badges
Then you can specialize - Master of ???
Building Software Craftsmen
A NEW MODEL FOR GROWING SOFTWARE PROFESSIONALS
Acknowledgements
The Agile Manifesto

“We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.”

-- http://www.agilemanifesto.org/
As aspiring Software Craftsmen we are raising the bar of professional software development by practicing it and helping others learn the craft.

Through this work we have come to value:

Not only working software, but also well-crafted software
Not only responding to change, but also steadily adding value
Not only individuals and interactions, but also a community of professionals
Not only customer collaboration, but also productive partnerships

That is, in pursuit of the items on the left we have found the items on the right to be indispensable.

http://manifesto.softwarecraftsmanship.org/
YOU
COMPLETE ME
<table>
<thead>
<tr>
<th>Quick Facts: Software Developers</th>
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| **2012 Median Pay** | $93,350 per year  
                     | $44.88 per hour   |
| **Entry-Level Education**       | Bachelor’s degree |
| **Work Experience in a Related Occupation** | None |
| **On-the-job Training**         | None |
| **Number of Jobs, 2012**        | 1,018,000         |
| **Job Outlook, 2012-22**        | 22% (Much faster than average) |
| **Employment Change, 2012-22**  | 222,600           |
Software Developers
Percent change in employment, projected 2012-22

- Software developers, applications: 23%
- Software developers: 22%
- Software developers, systems software: 20%
- Total, all occupations: 11%

Note: All Occupations includes all occupations in the U.S. Economy.
What isn’t working
What else have we tried?
On the Job Training
Make your Team Room a Workshop
Easy to say, but what do they learn?
Crafting Code
Technologies and Tools
Soft Skills
And how do they learn

- Watching their mentor
- Working closely with their mentor
- Working closely with each other
- Making “jigs”
- Start with simple tasks
- Gradually increasing responsibilities
Cognitive Apprenticeship

- Modeling
- Coaching
- Scaffolding
- Articulation
- Reflection
- Exploration
So What Does an Apprentice Do?

- Learn a language (or two)
- Work alongside a mentor
- Provide support
- Maintain the workshop
- Experiment
- Pair with all of the members
- Learn
- How much time should an apprentice be “productive”?
What’s in it for the mentor?
Finding an Apprentice
What to look for in an apprentice

- Strong enthusiasm for the job
- Willingness to work hard
  - Not just the fun stuff
  - No big egos allowed
- Prior experience really isn’t important
- Passion is the key
- College degree? Who really cares?
Getting there..

- A prospective journeyman must have paired with all of the other members of the workshop
- A “board of masters” must approve the apprentice’s passage to journeyman
- Journeyman will present some piece of work she has done on her own
  - Maybe an open source project
  - Some tool that helps around the shop
Becoming a Journeyman
Rite of Passage
Becoming a Master