Author also has a course "So you want to be an entrepreneur"

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An increasing trend of biometric security - can only make online payments using your fingerprint

Cybersecurity becoming increasingly important. Consider as a backup career path.

Have to consider legal and political factors with respect to new technology. Example of google self-driving cars competing with uber.

Virtual reality

Google fiber gives gigabit bandwidth. Only need 25 megabits/sec to stream HD videos. Possible black swan event in what people can do with all that excess bandwidth.

Supply and demand factors in tech careers:

Increased training -> increased supply

Outsourcing -> increased supply

Salary plateau -> decreased supply (senior devs quit getting salary increases, seek management positions)

Economic cycles -> increases or decreases demand, depending on the cycle

Tooling & platforms -> decreases demand (makes software development easier, allows non-programmers to do the same work)

New businesses & technologies -> increases demand

The barrier for entreneurship has gone down significantly, and yet self-employment has gone down!

1870s - 50% self-employed

1940s - 20% self-employed

Now - below 15%

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Top 10 Highest Paying Programming Languages

Ruby on Rails- $109,460

Objective C- $108,225

Python- $100,717

Java- $94,908

C++- $93,502

Javascript- $91,461

C- $90,134

R- $90,055

C#- $89,074

Visual Basic- $85,962

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The best opportunity for a new language to really catch on is when it is the native development language for a new platform.

When deciding what languages to learn, ignore everything that everyone says about language elegance and efficiency. Coding is a small part of the life cycle costs of a software project anyway. Ignore what is popular. Us programmers love our new toys and adopt languages because they are new and cool even if the demand for them is small. Instead, look to the platforms. The native or most popular language on a dominant platform will consistently offer job opportunities.

An outlier language would be one that makes multithread programming easy.

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Frameworks: .NET, Rails, Angular, JQuery, Bootstrap, Zend, ExtJS

Applications: Drupal, Wordpress, Visual Studio, Excel, SQL, Adobe products

Platforms as a Service: Azure, AWS, GCE, Force

Web Services: Facebook, Twitter, Google, Jira, Paypal, Ebay, Yahoo, Microsoft, every other web service with an available API

There are infinite ways to combine machines, virtual machines, services and applications to form a target platform for development. Each component has its own learning curve, and you can spend a lot of time figuring out how to combine these components to work well together. Deciding which platforms to learn is and will continue to be a critical part of both short and long-term career planning. It's far more important than language choice, and it's a very difficult choice to make.

It's not just a matter of predicting which platforms will dominate in the future. As with languages, you can usually see that coming and have plenty of time to gain expertise in that area. The real challenge is that the most popular platforms don't necessarily offer the best career opportunities, especially during an economic downturn. Here's why:

As technologists, we tend to focus on learning the hot new technology. We do this for a number of reasons: We want to keep up. We're afraid of being left behind and becoming obsolete, and rightly so. This results in an over-supply of developers in that area. What's more, developers in low-cost countries see the opportunity as well, which also drives the income down.

Listen less to developers and more to people who buy technology.

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Top 10 Technical Skills

1. Salesforce Architect

2. Security Architect

3. Dev Ops

4. Android Developer

5. Javascript front-end developer

6. iOS Developer

7. Project Manager

8. Data Architect

9. Big Data Engineer

10. Data Scientist

11. UX/UI Developer

12. Drupal Developer

13. Augmented Reality Developer

14. Network/System Security

15. Systems Engineer

16. PHP Developer

17. C#/.NET Developer

18. QA Engineer

19. Middleware Engineer

20. Interactive Designer

The author drifted away from Microsoft technologies to focus on the Salesforce platform. He developed applications on the platform and authored a book and a couple of pluralsight courses. The response from his peers ranged from confusion to mild condescension, as though he's not as real a developer as he once was. Yet demand in his new world is huge. The demand is so far ahead of supply that if a recession hit tomorrow, the demand could easily soak up the newly unemployed.

Because we as developers tend to follow popular technologies, it is very common to find less popular technologies that offer greater opportunities because fewer people are paying attention to them. Or put another way, a technology that is popular for business but less popular or cool for developers means big money for those developers who embrace it.

Also supporting legacy technologies (COBOL, anyone?)

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Things you can do without programming in Force.com

-Define a database

-Create a UI to access that database (with validtion, and security)

-Define business logic

-Create reports and dashboards

-Implement approval processes

-Connect to external services

-Send email

-Manage tasks, events and activities

-Etc

The only thing preventing this from becoming a disruptive outlier is the price and business model.

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If you know that the job market for your domain may be about to crash because of an outlier technology, look around for other domains you can start learning that aren't impacted by that technology.

3D printing is a disruptive outlier with respect to mass production (based on the customization it allows).

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Maybe learn some big data tools

Functional search- A search that does more than just return information (Ex of food search that automatically scales to the number of people you're hosting and gives local chefs in your area who can prepare it). Sites need to be configured to allow this, which could provide job opportunities.

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Specialization is extremely risky in technology careers

Use google trends

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Emphasis on soft skills