



What I Have Discovered While Working With Computers For 40 Years

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Outline

- A lack of access to the school mainframe led to a lifelong fight to promote computing access via open source and open hardware
- Teach problem-solving strategy and skills, not computers.
- How-to: Build a Career in Computer Science!
- Words of Wisdom

Lack of access

- Limited access to computing was common in 70's and 80's. 8/16 bit systems cost \$1K then or \$4K in today's dollars.
- In collage using Unix meant you had access to the manuals via “the man page”. Was my first exposure to a multi-honed distributed system.
- Then in the early 90's computers became affordable since you could build them from parts. Now it was the software that became expensive.
- Mid to late 90's Linux was introduced; it was not until early 2000s that Linux was consumable via distros and internet tech-support. Around this time MHV-LUG started which is now HV|Open today!

Liberated from being “end users”, today we share an open collaborative environment

Problem-solving strategy and skills

- What is the value of an employee with only programming skills?
What is the value of experience?
What is the value of Wisdom?
- Should we teach programming languages or programming experience?
- You can effectively teach problem solving in the context of computing given enough examples to work through.
- Going forward in to the new field of AI where bias and other factors affect outcome, new strategies will need to evolve. Also in the field of Quantum with it's many states, the complexity cannot be dealt with without machine assistance.

Do not fear the unknown, understand it!

How-to: Build a Career in Computer Science!

- Stand out from the crowd, like discover a new method to solve a classically hard computing problem.
- Treat all your co-workers as if they will be your manager someday, since one of them likely will.
- Your job is to make your manager look good also the people in your direct management chain. Own your work, while also creatively explaining how your great deeds benefit the company which were the result of their outstanding leadership.
- Being a mentee is hard work. Do the work! The best of the best do like to mentor!
- Capital: Skill, Reputation, Experience. You need to constantly convert one in to the other to climb the ladder or break the glass ceiling.

Words of Wisdom

- "One of the best programming skills you can have is knowing when to walk away for awhile." - Oscar Godson
- "If it doesn't work, it doesn't matter how fast it doesn't work." - Mich Ravera
- "Don't worry if it doesn't work right. If everything did, you'd be out of a job." - Mosher's Law of Software Engineering
- "The beatings will continue until morale improves." - Captain Bligh in Mutiny on the Bounty



Technical groups in the Hudson Valley

- HV|Open <https://hvopen.org>
Slack <https://hvopen.org/slack>
- Squid Wrench <http://squidwrench.org/>
- HVTech <http://www.hvtech.org/>
- HVDN <https://hvdn.org/>

