Senior project ideas

If you are solving a real-world problem, either work-oriented or personal, these ideas tend to work best. Talk to people in industry, especially those that you would like to hire you. Perhaps they have a project you can work on that could turn into a job when you are done.

Remember that while web development or programming projects might not be the best fit, projects that involve scripting (BASH, BAT, etc.. are VERY appropriate)

- Infrastructure configuration, deployment
  - mirroring, pxr
- Management and monitoring

New and relevant technologies are awesome! We can’t cover everything in our program, but there are many other things to learn!

Ideas for 2017

- Active directory, samba4 integration?
- Network monitoring solution.
- Recreate IT3100 with docker
- Develop virtual machine system (like shakespeare) with Docker.
- Kubernetes
- Hadoop
- Openstack
- Amazon...

What NOT to do

- Don’t try to just do something that you have learned in other courses. I have had students say, “I want to do all the IT3100 assignments again, but in Windows.” That isn’t much of a stretch. The goal should require you to significantly stretch.
- Stuff that will cost a lot. (One semester, I had a student waiting a significant amount of time for something to be shipped to him).
- Stuff that doesn’t do anything for you!

Past ideas:

2016

- Network boot and imaging system
- VPN exploration
- Advanced Database usage and integration with Office apps
- Virtual Machine Farm and exploration
- Fog, clonezilla, dd (imaging)
- Samba4 and Active Directory integration
- Cisco emergency responder

2015

- Virtualization, DMZ (IT3100 services) (Using Hyper-v)
- Azure cloud platform
- LAMP ticketing system
- Ansible, vagrant, docker
- Home network (AD, freenas, raspberry pi)
- Tacacs authentication server
- Cisco intelligent services gateway
- Penetration testing
- Build and program a 3d printer
2014

- Forensics
- VMware horizon suite
- Automatically extract forensic info from cellphone
- Proxmox
- Raspberry pi VPN
- oracle
- Encryption comparison and benchmarks