**AWS Educate Cloud Computing**

Dave Parmele: Military/college board/amazon

TO DO: Visit his booth and make sure I have a login

1. **Amazon**

Impetus: AWS IT infrastructure: to ship

Compute, storage, database, analytics, application, deployment

2006 offered IT infrastructure services to businesses

1. **Cloud Computing**

On-demand delivery of IT services (resources and applications)

What is cloud computing?

Data centers to store “services” (own: lots of services)

People to keep running

Users: government, education, etc.

Global availability (automatically replicated across two more availability zones)

Users: Netflix (deliberately kills availability zone during testing)

1. **How cloud computing impacts workforce**
   1. Certification programs
   2. Range: Fortune 100 companies; single developers
   3. Examples: Coursera; netflix; Airbnb, yelp; reddit; Nintendo, nasa, codejs; intuit, blacboard
   4. Companies do not do their own hardware
   5. 4th industrial revolution
      1. Textile industry
      2. Assembly line and mass production
      3. Personal computer (1980/90)
      4. The cloud, iot, robotics, machine learning
   6. Aws services/features
      1. Artificial intelligence, satellite ground stations
      2. Growing exponentially since 2011 (80) -> 2017 (1430)
   7. 31 billion dollar business plus 41% growth AWS only
   8. “Cloud Computing” #1 sought skill on linkedin for four years
      1. AWS Certified Developer
      2. Certified Solutions Architect 115
      3. Certified SysOps Admin
   9. Time to hire increased 80% 2009 to 2015; 85 million mid-to-high skill job gap by 2020
   10. Collaborate on systemic change: government; industry; education
2. **AWS educate**
   1. Mission: connect students to jobs in the cloud
   2. Offers:
      1. Open course content
      2. Grants for free access to AWS
         1. The cloud as a utility (pay for what use)
            1. Students do not have to use a credit card/ access is capped
            2. Various types of servers available (appropriate for different applications)

Genome sequency

Static web-site

* + - * 1. Can turn “utility” (cloud) off
        2. Students pre-loaded with credits; can get credits from teachers
    1. Micro-credentials (new)
    2. Professional development
    3. George Mason University 4-year degree)
       1. 2-year degree with community college
    4. Communities of collaboration
       1. Every coursework developed must be public (example Santa Monica College and Northern Virginia Community College) (Florida, Louisiana, Texas)
    5. Job and internship board
       1. Including internships

1. **How to get started with AWS educate**
   1. Schools use in addition to other courses
   2. Badges: (examples)
      1. Data in the cloud (vs. just data)
         * 1. Massive open-data sets

**AWS Educate experience for: Students under 18**

Cloud Explorer (no computer science background) (younger students)

Teaches concepts

Challenges: cloud computing

Own: use as Tech Ed credit

Cloud Inventor (same concepts/ broader/deeper way) enrolled in AP CompSci classes

Knows: data, networking, software

Cloud Builder Badge (own: use in Guided Research)

Not only concepts

Uses AWS console

Build a chatbot, genomics research

S3 (online storage service)

Scavenger hunt; chatbot

14 challenges

Advanced Badges (10-15 hours each) (attractive on resume for entry-level position)

DeepLens Badge (ai-powered autonomous camera)

AWS RoboMaker Badge (robotics)

AWS DeepRacer

Sumerian

Gaming

IoT

Startup

Pathyways: (30 plus hours of content) (for higher education students)

Focused on a career

Map to most in-demand jobs in industry

101 (for adult students that need an introduction)

Application developer

Cloud Support associate

Cloud support engineer

Cybersecurity specialist

Data integration specialist

Data scientist

Originally: 30; narrowed to 11 based on student interest/need

Earn digital credential

Badges: (in canvas)

Provision starter account (vocareum)

HUGE list of AWS services (understand via

HOW TO:

Starter bucket Amazon s3

Own: politics in school system FERPA-compliant

Working on: making micro-credentials shareable on job applications

Cloud hygiene: tools to do (turn off when not used)

Tools: for monitoring usage; auto-scaling up and down

(part of builder badge training)

**Educator Experience**

They check: School exists; domain exists; e-mail works

**Tools to bypass**

New processes: teacher invites

Name country school age-range

**Institutional-level Experience**

(white-list e-mail domain; individual shorter application)

Content

Santa Monica curriculum

“common cartridge” files ??

k-12 facilitator guides

Request an AWS Classroom

Access to new virtualized account (you have access to)

Invite students (custom, short .url)

Students get extra AWS credits

Launches into different AWS

Example: do on cloud9 access or big data

If LMS with LTI capability (LTI ) (does canvas have it?)

Register through LMS: single sign-on SSO-in