LABOR MARKET INTELLIGENCE: 
WHY SHOULD YOU CARE?

Presentation to the 
Texas Community College Technology Forum 
November 16, 2012
BATEC (Broadening Advanced Technological Education Connections):

An NSF ATE National Center of Excellence for Computing and Information Technologies
Overarching Goals:

- Define, extend and strengthen computing pathways and career opportunities for the 21st century IT professional.

- Facilitate and leverage strategic partnerships to build awareness, generate interest, and support learning opportunities in the ethnically diverse urban areas of Boston, Chicago, Las Vegas and San Francisco.

- Conduct actionable research to inform policy makers, IT educators and workforce development agencies.

- Participate in and lead the national discussion on the subject of integrated curriculum and applied IT.
High School → Community College Associate's Degree → University Bachelor's Degree → University Graduate Degree → Professional or Managerial Job → Sustainable Wage Job → Entry Level Job
Where will the STEM* Jobs be?

Projected Annual Growth of Total STEM* Job Openings 2010-2020

*STEM is defined here as non-medical jobs.

Degrees vs. Jobs: A Disconnect

# Show me the Money!
Top 10 Major Occupational Groups 2010-2020 and Average Salaries in May 2011

<table>
<thead>
<tr>
<th>Major Occupational Group</th>
<th>% Growth 2010-2020</th>
<th>2011 Average Annual Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Healthcare Support Occupations</td>
<td>35%</td>
<td>$27,370</td>
</tr>
<tr>
<td>2 Personal Care and Service Occupations</td>
<td>27%</td>
<td>$24,620</td>
</tr>
<tr>
<td>3 Healthcare Practitioners and Technical Occupinations</td>
<td>26%</td>
<td>$72,730</td>
</tr>
<tr>
<td>4 Community and Social Service Occupations</td>
<td>24%</td>
<td>$43,830</td>
</tr>
<tr>
<td>5 Construction and Extraction Occupations</td>
<td>22%</td>
<td>$44,630</td>
</tr>
<tr>
<td>6 <strong>Computing and Mathematical Occupations</strong></td>
<td><strong>22%</strong></td>
<td><strong>$78,730</strong></td>
</tr>
<tr>
<td>7 Business and Financial Operations Occupations</td>
<td>17%</td>
<td>$68,740</td>
</tr>
<tr>
<td>8 <strong>Life, Physical, and Social Science Occupations</strong></td>
<td><strong>16%</strong></td>
<td><strong>$67,470</strong></td>
</tr>
<tr>
<td>9 Education, Training, and Library Occupations</td>
<td>15%</td>
<td>$50,870</td>
</tr>
<tr>
<td>10 Transportation and Material Moving Occupations</td>
<td>15%</td>
<td>$33,200</td>
</tr>
</tbody>
</table>

ManpowerGroup’s Annual Survey in 2011 showed that “52% of US employers were having difficulty in filling mission-critical positions, within their organizations, up from 14% in 2010”

Record Unemployment;

Yet...

Significant Numbers of Unfilled Jobs;

Heightened...

Attention at all levels to this Issue;

Resulting in a need for...

Better Understanding about the Problem
BATEC Interim Report on Middle Skill Job Openings released June 2012

An Analysis of Information Technology Middle Skill Job Openings 2011

BATEC Broadening Advanced Technological Education Connections TechAmerica June 2012
Key Findings:

- Computer and Information Technology occupations to grow by 22% next 10 years
- Equates to approximately 75,000 new jobs each year
- Middle skill jobs are projected to comprise 38% of those new jobs.

Key Findings:

Two “High Demand” Occupations

- Network and Computer Systems Administrator (15-1142.00)
- Computer Systems Analysts (15-1121.00)

(US Department of Labor, Employment and Training Administration)
Burning Glass Labor Insight ©

- Advanced analytic application for analyzing, trending and comparing real-time jobs data
  - Geography
  - Time Period
  - Industry
  - Occupation
  - Education
  - Skills

- Over 7 Million Job Postings from over 20,000 Sources
Top detailed occupations

There are 257,332 postings available with the current filters applied.  
There are 0 unspecified or unclassified postings.  
08/18/2012 - 11/15/2012 (Data not available after 11/10/2012)

Active Selections
Education: Bachelor's degree
Education: Post-secondary or associate's degree
Education: High school
Occupation family with: Computer and Mathematical

Software Developers, Applications - 52,495
Computer Systems Analysts - 31,995
Computer Programmers - 31,988
Information Technology Project Managers - 21,372
Computer User Support Specialists - 15,831
Network And Computer Systems Administrators - 15,646
Computer Systems Engineers/Architects - 14,752
Employers with the most job openings

There are 257,332 postings available with the current filters applied. There are 76,796 unspecified or unclassified postings.
08/18/2012 - 11/15/2012 (Data not available after 11/10/2012)

Active Selections
Education: Bachelor's degree
Education: Post-secondary or associate's degree
Education: High school
Occupation family with: Computer and Mathematical

<table>
<thead>
<tr>
<th>Company</th>
<th>Job Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
<td>4,003</td>
</tr>
<tr>
<td>GENERAL DYNAMICS</td>
<td>2,274</td>
</tr>
<tr>
<td>ACULIGHT CORPORATION</td>
<td>2,037</td>
</tr>
<tr>
<td>NORTHROP GRUMMAN</td>
<td>2,033</td>
</tr>
<tr>
<td>BEST BUY</td>
<td>1,805</td>
</tr>
<tr>
<td>COMPUTER SCIENCES CORPORATION</td>
<td>1,801</td>
</tr>
<tr>
<td>SCIENCE APPLICATIONS INTERNATIONAL CORPORATION</td>
<td>1,756</td>
</tr>
<tr>
<td>AMAZON.COM</td>
<td>1,667</td>
</tr>
<tr>
<td>HEWLETT-PACKARD</td>
<td>1,348</td>
</tr>
<tr>
<td>MANTECH INTERNATIONAL CORP.</td>
<td>1,092</td>
</tr>
</tbody>
</table>
Employment trends for an occupation or occupation group

There are 10,352 postings available with the current filters applied.
There are 0 unspecified or unclassified postings.
08/17/2012 - 11/14/2012 (Data not available after 11/09/2012)

Active Selections
Education: High school
Education: Post-secondary or associate's degree
Education: Bachelor's degree
Occupation family with: Computer and Mathematical
State: Texas

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### Industries with the highest levels of employment in IT:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Employment (1)</th>
<th>Percent of industry employment</th>
<th>Hourly mean wage</th>
<th>Annual mean wage (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Systems Design and Related Services</td>
<td>844,670</td>
<td>56.35</td>
<td>$39.77</td>
<td>$82,730</td>
</tr>
<tr>
<td>Management of Companies and Enterprises</td>
<td>196,190</td>
<td>10.30</td>
<td>$37.25</td>
<td>$77,480</td>
</tr>
<tr>
<td>Software Publishers</td>
<td>134,370</td>
<td>50.70</td>
<td>$42.60</td>
<td>$88,600</td>
</tr>
<tr>
<td>Insurance Carriers</td>
<td>126,850</td>
<td>10.91</td>
<td>$37.98</td>
<td>$78,990</td>
</tr>
<tr>
<td>Management, Scientific, and Technical Consulting Services</td>
<td>108,580</td>
<td>10.31</td>
<td>$41.18</td>
<td>$85,660</td>
</tr>
</tbody>
</table>

## Top Paying Industries for IT Workers:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Employment (1)</th>
<th>Percent of industry employment</th>
<th>Hourly mean wage</th>
<th>Annual mean wage (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer and Peripheral Equipment Manufacturing</td>
<td>52,740</td>
<td>33.22</td>
<td>$47.57</td>
<td>$98,940</td>
</tr>
<tr>
<td>Aerospace Product and Parts Manufacturing</td>
<td>38,830</td>
<td>8.21</td>
<td>$45.95</td>
<td>$95,580</td>
</tr>
<tr>
<td>Communications Equipment Manufacturing</td>
<td>14,870</td>
<td>13.16</td>
<td>$45.71</td>
<td>$95,080</td>
</tr>
<tr>
<td>Securities and Commodity Contracts Intermediation and Brokerage</td>
<td>32,020</td>
<td>6.92</td>
<td>$45.58</td>
<td>$94,810</td>
</tr>
<tr>
<td>Navigational, Measuring, Electromedical, and Control Instruments Manufacturing</td>
<td>46,240</td>
<td>11.38</td>
<td>$44.66</td>
<td>$92,900</td>
</tr>
</tbody>
</table>

### Top detailed occupations

There are 18,352 postings available with the current filters applied.
There are 0 unspecified or unclassified postings.
08/17/2012 - 11/14/2012 (Data not available after 11/09/2012)

#### Active Selections

- **Education:** High school
- **Education:** Post-secondary or associate's degree
- **Education:** Bachelor's degree
- **Occupation family with:** Computer and Mathematical
- **State:** Texas

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Developers, Applications</td>
<td>3,364</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>2,497</td>
</tr>
<tr>
<td>Computer Programmers</td>
<td>2,286</td>
</tr>
<tr>
<td>Information Technology Project Managers</td>
<td>1,666</td>
</tr>
<tr>
<td>Computer User Support Specialists</td>
<td>1,233</td>
</tr>
<tr>
<td>Computer Systems Engineers/Architects</td>
<td>1,160</td>
</tr>
</tbody>
</table>

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Distribution of jobs by industry sector (current period vs. previous period)

Current Period
Total Job Openings=18,352
Unspecified/Unclassified= 4,635
08/17/2012 - 11/14/2012 (Data not available after 11/09/2012)

Previous Period
Total Job Openings=20,455
Unspecified/Unclassified = 5,042
08/17/2011 - 11/14/2011

Active Selections

Education: High school
Education: Post-secondary or associate's degree
Education: Bachelor's degree
Occupation family with: Computer and Mathematical
State: Texas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional, Scientific, and Technical Services</td>
<td>3,215</td>
<td>23.4%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2,849</td>
<td>20.8%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>1,254</td>
<td>9.1%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Administrative and Support and Waste Management and Remediation Services</td>
<td>1,221</td>
<td>8.9%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Information</td>
<td>1,048</td>
<td>7.6%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>746</td>
<td>5.4%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Educational Services</td>
<td>739</td>
<td>5.4%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>626</td>
<td>4.6%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>538</td>
<td>3.9%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>497</td>
<td>3.6%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>
### Employers with the most job openings

There are 18,352 postings available with the current filters applied.
There are 5,212 unspecified or unclassified postings.
08/17/2012 - 11/14/2012 (Data not available after 11/09/2012)

### Active Selections

<table>
<thead>
<tr>
<th>Education</th>
<th>Occupation family with</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school</td>
<td>Computer and Mathematical</td>
<td>Texas</td>
</tr>
<tr>
<td>Post-secondary or associate's degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Top Employers:

<table>
<thead>
<tr>
<th>Employer</th>
<th>Number of Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELL</td>
<td>257</td>
</tr>
<tr>
<td>HEWLETT-PACKARD</td>
<td>223</td>
</tr>
<tr>
<td>PALM / HP</td>
<td>186</td>
</tr>
<tr>
<td>IBM</td>
<td>180</td>
</tr>
<tr>
<td>ACULIGHT CORPORATION</td>
<td>164</td>
</tr>
<tr>
<td>UNIVERSITY OF TEXAS</td>
<td>152</td>
</tr>
<tr>
<td>RACKSPACE</td>
<td>146</td>
</tr>
<tr>
<td>L3 COMMUNICATIONS HOLDING INCORPORATED</td>
<td>130</td>
</tr>
<tr>
<td>CITI</td>
<td>127</td>
</tr>
<tr>
<td>BEST BUY</td>
<td>125</td>
</tr>
</tbody>
</table>

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Skills in greatest demand

There are 18,352 postings available with the current filters applied.
There are 59 unspecified or unclassified postings.
08/17/2012 - 11/14/2012 (Data not available after 11/09/2012)

Active Selections
Education: High school
Education: Post-secondary or associate's degree
Education: Bachelor's degree
Occupation family with: Computer and Mathematical
State: Texas

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Active Selections
Education: High school
Education: Post-secondary or associate's degree
Education: Bachelor's degree
Occupation family with: Computer and Mathematical
State: Texas

Skill clusters in demand
There are 18,352 postings available with the current filters applied.
There are 0 unspecified or unclassified postings.
08/17/2012 - 11/14/2012 (Data not available after 11/09/2012)

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Certifications in greatest demand

Note: 85% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

There are 18,352 postings available with the current filters applied. There are 15,687 unspecified or unclassified postings.
08/17/2012 - 11/14/2012 (Data not available after 11/09/2012)

Active Selections
Education: High school
Education: Post-secondary or associate's degree
Education: Bachelor's degree
Occupation family with: Computer and Mathematical
State: Texas

- Project Management Certification (e.g. Pmp) 565
- Cisco Certified Network Associate 375
- Microsoft Certified Systems Engineer (mces) 325
- Cisco Certified Network Professional (ccnp) 244
- Certified Information Systems Security Professional (cissp) 244
- Certified A+ Technician 185
- Security+ 156
- Cisco Certified Internetwork Expert (ccie) 139
- Network+ Certified 134
- Microsoft Certified Professional (mcp) 117

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Knowledge is POWER!

So now that you have some insights…

What will this mean for you and your students?
Contact Information:

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Website: www.batec.org