

Chapter 9

E-commerce: Digital Markets, Digital Goods

LEARNING TRACK 4: HOT NEW CAREERS IN E-COMMERCE

The Internet/e-commerce economy is hot again, and the prospects for employment in this rapidly expanding segment of the economy have never been better. In 2008, e-commerce retail and service revenues will exceed \$200 billion. This includes retail, personal services (like YouTube and PhotoBucket), as well as travel and digital download services. Overall, the e-commerce economy is growing at 25% a year.

The Internet economy, a somewhat larger segment of which e-commerce is a significant part, and includes sales of computers, servers, telecommunications, routers, and a myriad number of technological gadgets that make the Internet work, arguably approaches \$1 trillion in annual revenues.

Marketing and advertising are shifting from traditional media towards interactive, participative Web 2.0 sites creating additional new employment opportunities for marketing specialists. Internet advertising and marketing reached \$18 billion in 2007, and is projected to grow to \$22 billion in 2008. Add these numbers to the growth in the overall Internet economy and you will discover an employment market for a wide variety of skills from marketing to finance, information systems, and management.

With the Internet/e-commerce economy booming, the related job market is hot again as well. According to the U.S. Department of Labor's Occupational Outlook Handbook, 2006-2007 edition, the market for computer and information systems managers will grow faster than average looking out to 2014, which translates to growth of 18 to 26 percent. Joining these managers with a growth rate that is faster than the average are support specialists.

Projections promise an even better future for computer scientists, database administrators, systems administrators, and systems analysts. These workers will see their job market grow much faster than the average (27 percent or higher growth rate). Computer scientists and database administrators are among the fastest growing segments included in the handbook. Job seekers with advanced degrees will fare especially well, with undergraduate degrees also providing a smooth entryway to these jobs. Systems analysts will find many job openings created by the promotion of former analysts to manager positions.

The category of computer systems design and related services was one of the fastest growing industry segments in the 1990s, doubling in size during that decade. It remains one of the 25 fastest growing segments today thanks to increased reliance on information technology by so many other industries. The computer systems design and related services market is expected to grow by 40 percent over the ten-year period ending in 2014. The economy as a whole will grow by only 14 percent during that time.

One segment that you need to be careful in pursuing is programming. The handbook projects programming jobs to grow more slowly than the average, or at a rate of zero to eight percent. Programming jobs are often contract work for which there is intense competition. Growth in this area is limited because programming jobs are easily outsourced to other countries, and sophisticated computers have eliminated much of the routine work that used to require programmers. The consolidation and centralization of applications, combined with new ways of developing software such as

mashups, widgets, and web services, has further reduced the need for a high headcount of programmers. Other technology workers now have the tools they need to tackle programming tasks that used to be the exclusive domain of coders, who now require an increasingly sophisticated skill level to remain viable.

Two of the hottest concepts in today's e-commerce and Internet economies are project management and data mining. The greatest opportunities will be available to workers who have diverse technology skill sets and solid comprehension of business principles. Workers who focus on only one specific technology may find themselves squeezed out of the market. As these economies continue to grow, companies are taking on more and more IT projects. Hiring managers will need people to manage these projects who are skilled IT professionals as well as competent businesspeople.

Data mining tools can be very valuable to e-commerce businesses, offering a return on investment that often exceeds 1,000 percent. Online businesses are also using Web 2.0 tools, such as blogs, wikis, and RSS feeds, to help convert browsers into buyers.

The following table provides a glimpse at some of the hot jobs being offered in the e-commerce and Internet job spheres:

TABLE 3 Hot Jobs in E-commerce

Job Title	Description	Average Salary
Computer forensic specialist	Examines storage media to extract information from documents, spreadsheets, instant messages, and e-mail; mines data for indications of tampering or attempts to conceal; may require formal education and/or certification.	\$50,000-\$95,000
Business relationship manager	Bridges the gap between business interests and IT operations; ensures the implementation of required technologies and adherence to standards for their use.	\$120,000-\$200,000
Systems administrator	Installs, monitors, upgrades, and maintains hardware and software to support the business; manages operating systems, business applications, servers, network components, security, e-mail systems, and PCs.	\$65,000-\$85,000
Enterprise architect	Builds a company's IT infrastructure based on business goals; determines strategy for aligning business goals with IT projects	\$130,000-\$150,000
Windows administrator	Implements and manages software with a focus on security, policy, user access, and troubleshooting; installs, configures, and administers Windows across an organization.	\$40,000-\$90,000
Cybersecurity specialist	Defends organization from hacking and other cybercrime; includes anti-virus strategies, credit card encryption, and steganography.	\$70,000-\$100,000
Web site/database integrator	Uses standard Web programming languages, database languages, and languages, and knowledge of legacy systems (e.g. accounting, financial, inventory) to connect Internet or Intranet sites with business-critical databases.	\$80,000-\$90,000
Web programmer/developer	Designs and develops Web-based applications; responsibilities include design analysis, coding, QA, creation of technical specs and end-user documentation, and integration of third-party tools.	\$50,000-\$95,000
E-commerce CFO	Typically desired by companies that are planning to go public; must be well-versed in IPO process and skilled at raising revenue and building a brand.	\$125,000-\$300,000
Vice President, E-commerce	Develops e-commerce marketing strategies to drive revenue and increase sales; oversees creation of linked networks, databases, and business solutions; skilled at identifying trends; designs and directs online offers to increase revenue per site visit.	\$165,000-\$250,000
Information engineer	Uses data analytics and network administrator experience to sift through multitudes of data and identify and explain trends in site traffic.	\$70,000-\$120,000
E-commerce marketing manager	Creates and coordinates consumer and online marketing strategies; uses data mining and modeling to maximize sales and build brand loyalty; researches marketing partnership opportunities.	\$80,000-\$120,000

TABLE 3 Hot Jobs in E-commerce (continued)

Job Title	Description	Average Salary
E-commerce business analyst	Uses financial and analytical background to track e-commerce business trends; monitors and manages success of new products and initiatives; uses data mining techniques to provide timely and accurate analyses.	\$60,000-\$90,000
Electronic data Interchange (EDI) Specialist	Defines EDI document specs; supports EDI project implementations and production systems; performs analysis, design, coding, and QA for EDI applications; administers and maintains data change logs.	\$50,000-\$80,000
Senior e-commerce product manager	Defines, builds, drives, and manages the full life cycle of products; identifies market and customers; tracks industry trends and key product metrics; performs benchmark analysis.	\$90,000-\$130,000
Web designer	Designs and builds back-end e-commerce system; designs and builds front-end e-commerce site; creates Web pages to meet customer needs and organization strategy; participates in project management strategy development, budgeting, and analytics.	\$45,000-\$75,000
Webmaster	Responsible for Web site design, architecture, content management, and generating and monitoring traffic for optimization; interfaces with department heads to ensure that needs are being met; develops and supports Web site applications.	\$45,000-\$90,000

Sources: "Robert Half Technology 2007 Salary Guide," www.rht.com; "The Hottest Jobs in Information Technology," CIO, March 30, 2007; Juan Carlos Perez, "Hot IT Jobs: Systems Administrator," Computerworld, August 26, 2007; China Martens, "Enterprise Architect," IDG News Service, accessed via www.cio.com, August 3, 2007; Emily Wengert, "New Fields Offer Lucrative Careers," hotjobs.yahoo.com, accessed October 8, 2007; Sacha Cohen, "Hot Career Trends for the 21st Century," learning.monster.com, accessed October 10, 2007; "The New Careers," CNNMoney.com, accessed October 10, 2007; Elizabeth Bennet, "Web 2.0: Turning Browsers into Buyers," Baseline, June 14, 2007; "Data Mining: An E-commerce Revolution? Pt II," www.zdnet.co.uk, accessed October 10, 2007; and Sharon Gaudin, "The Hot Jobs for 2006," itmanagement.earthweb.com, January 13, 2006.