Computer and Information Systems Manager Benjamin Houlton

Average annual income

* 130,000

Employment Outlook

* Very good

Definition and Nature of the Work

* Computer and information systems managers direct and manage various computer-related activities of a company.
* They construct business plans, oversee Internet and computer operations, assign projects to staff members, and direct the flow of work. Computer and information systems managers work in manufacturing, industry, government, and educational institutions. They generally are in charge of facilities that have many programmers, systems analysts, and peripheral equipment operations. They report to the top management of their organizations.
* They must have a thorough working knowledge of programming and systems analysis.
* must be able to instruct the information technology staff to carry out these procedures.
* Managers must keep up with new developments in computers.

Education and Training Requirements

* Bachelors degree, many years of experience in the field
* Need to know about programming and software to be a computer information systems manager
* Many employers have online training for employees
* Government sometimes offers training to low income employees
  + 1. College courses
* Math
* Programming
* And business classes

Getting the Job

* Computer and information systems managers usually are chosen from the ranks of programmers and systems analysts or are brought in from outside the company.
* A college placement office can help students find a job in an information technology company that has an executive training program.
* Insurance companies, utilities, and universities and colleges often have sizable installations.
* If a person is interested in a government job, he or she should apply to take the necessary civil service examination.

Advancement Possibilities and Employment Outlook

* computer and information systems managers are often promoted to the top management of their organizations.
* also may be given management jobs outside the field of data processing.
* 280,000 computer and information systems managers were employed in 2004.
* Employment of computer and information systems managers was predicted to grow faster than the average for all occupations through the year 2014.
* The employment outlook is very good for skilled people who keep up with new developments in this ever-changing field.

Working Conditions

* Computer and information systems managers usually work in offices close to computer rooms.
* Much of their work is done independently.
* They work under some pressure to deliver information technology solutions that suit their firms' needs.
* work forty hours per week and can expect to work extra hours to meet project deadlines.

Earnings and Benefits

* Benefits usually include paid vacations and holidays, health and life insurance, and pension plans.

A Day in a Computer and Information Systems Manager's Life:

On a typical day a computer and information systems manager will

* consult with top management in order to help determine both technical and business goals;
* make detailed plans for the accomplishment of these goals;
* direct the work of [systems analysts](http://careerplanning.about.com/od/occupations/p/compsysanalyst.htm), [computer programmers](http://careerplanning.about.com/od/occupations/p/comp_programmer.htm), [support specialists](http://careerplanning.about.com/od/occupations/p/tech_support.htm), and other computer-related workers;
* provide the upkeep, maintenance and security of networks;
* assign and review the work of their subordinates;
* Chief technology officers evaluate the newest and most innovative technologies and determine how these can help their organization;
* Management information systems directors manage information systems and computing resources for their entire organization;
* Project managers develop requirements, budgets, and schedules for their firm's information technology projects;
* [LAN/WAN](http://compnetworking.about.com/od/basicnetworkingconcepts/a/network_types.htm) (Local Area Network/Wide Area Network) managers design and administer an organization's local area network; they direct the network, and its related computing environment, including hardware, systems software, applications software, and all other computer-related configurations.;

**Tasks**

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| **Importance** |  | | **Task** |
| 84% |  | Review project plans to plan and coordinate project activity. | |
| 78% |  | Manage backup, security and user help systems. | |
| 76% |  | Develop and interpret organizational goals, policies, and procedures. | |
| 75% |  | Develop computer information resources, providing for data security and control, strategic computing, and disaster recovery. | |
| 74% |  | Consult with users, management, vendors, and technicians to assess computing needs and system requirements. | |
| 74% |  | Stay abreast of advances in technology. | |

**Tools & Technology**

**Tools** used in this occupation:

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| **Computer servers** — File servers; Mid-range computers; Netware servers; Web servers [(see all 7 examples)](http://www.onetonline.org/link/tt/11-3021.00/43211501/) |
| **Computer tool kits** |
| **Facsimile machines** — Fax Machines |
| **Floppy drives** |
| **High end computer servers** — Workstations |
| **Mainframe computers** |
| **Network analyzers** |
| **Network switches** |
| **Photocopiers** |
| **Teleconference equipment** — Teleconferencing equipment |

**Technology** used in this occupation:

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| **Application server software** — BEA WebLogic Server; Microsoft Windows Server; Progress OpenEdge Application Server |
| **Customer relationship management CRM software** — ACT! software; Microsoft Dynamics CRM; Oracle Siebel Server Sync; Performance Solutions Technology ManagePro |
| **Data base management system software** — AlphaFour software; Microsoft SQL Server; Oracle software; Progress OpenEdge Fathom Replication software |
| **Development environment software** — C; K2 Business Process Automation; Microsoft Visual Basic; Progress OpenEdge ABL |
| **Electronic mail software** — Linux-based email software; Microsoft Outlook; Pegasus software; QUALCOMM Eudora |
| **Enterprise resource planning ERP software** — Infor ERP Baan; Microsoft Dynamics AX; Microsoft Dynamics NAV; Oracle E-Business Suite |
| **Filesystem software** — Ftp program software; Samba; Symantec Veritas File System; Symantec Veritas Volume Manager |
| **Object or component oriented development software** — Borland Paradox; C++; Microsoft SQL Server Reporting Services SSRS; Practical extraction and reporting language Perl |
| **Operating system software** — Apple Macintosh OS/X; Microsoft Windows; Shell script; UNIX |
| **Web platform development software** — Hypertext markup language HTML; JavaScript; Progress WebSpeed Workshop; Ruby on Rails [\*](http://www.onetonline.org/link/details/11-3021.00#ttsoft) |

\* Software developed by a government agency and/or distributed as freeware or shareware.

**Knowledge**

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| **Importance** | **Knowledge** |
| 88 | **Computers and Electronics** — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming. |
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| 36 | **Communications and Media** — Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media. |
| 34 | **Education and Training** — Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects. |
| 33 | **Design** — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models. |

**Skills**

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| **Importance** | **Skill** |
| 81 | **Reading Comprehension** — Understanding written sentences and paragraphs in work related documents. |
| 75 | **Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. |
| 72 | **Complex Problem Solving** — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. |
| 72 | **Monitoring** — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action. |
| 72 | **Writing** — Communicating effectively in writing as appropriate for the needs of the audience. |

**Work Activities**

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| **Importance** | **Work Activity** |
| 95 | **Interacting With Computers** — Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information. |
| 92 | **Getting Information** — Observing, receiving, and otherwise obtaining information from all relevant sources. |
| 86 | **Establishing and Maintaining Interpersonal Relationships** — Developing constructive and cooperative working relationships with others, and maintaining them over time. |
| 86 | **Thinking Creatively** — Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions. |
| 84 | **Developing and Building Teams** — Encouraging and building mutual trust, respect, and cooperation among team members. |
| 84 | **Updating and Using Relevant Knowledge** — Keeping up-to-date technically and applying new knowledge to your job. |
| 83 | **Identifying Objects, Actions, and Events** — Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events. |
| 82 | **Evaluating Information to Determine Compliance with Standards** — Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards. |
| 81 | **Guiding, Directing, and Motivating Subordinates** — Providing guidance and direction to subordinates, including setting performance standards and monitoring performance. |
| 81 | **Interpreting the Meaning of Information for Others** — Translating or explaining what information means and how it can be used. |
| 81 | **Making Decisions and Solving Problems** — Analyzing information and evaluating results to choose the best solution and solve problems. |
| 78 | **Analyzing Data or Information** — Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts. |
| 78 | **Coaching and Developing Others** — Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills. |
| 78 | **Developing Objectives and Strategies** — Establishing long-range objectives and specifying the strategies and actions to achieve them. |
| 78 | **Documenting/Recording Information** — Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form. |
| 75 | **Coordinating the Work and Activities of Others** — Getting members of a group to work together to accomplish tasks. |
| 73 | **Communicating with Persons Outside Organization** — Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail. |
| 72 | **Resolving Conflicts and Negotiating with Others** — Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others. |

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| 95 | **Enterprising** — Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business. |
| 72 | **Conventional** — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow. |
| 56 | **Investigative** — Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally. |
| 50 | **Realistic** — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others. |
| 11 | **Artistic** — Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules. |
| 11 | **Social** — Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others. |

**Work Styles**

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| **Importance** | **Work Style** |
| 94 | **Dependability** — Job requires being reliable, responsible, and dependable, and fulfilling obligations. |
| 94 | **Integrity** — Job requires being honest and ethical. |
| 93 | **Adaptability/Flexibility** — Job requires being open to change (positive or negative) and to considerable variety in the workplace. |
| 85 | **Attention to Detail** — Job requires being careful about detail and thorough in completing work tasks. |
| 84 | **Cooperation** — Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude. |
| 79% | **Independence** — Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done. |
| 75% | **Innovation** — Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems. |
| 75% | **Self Control** — Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations. |
| 64% | **Stress Tolerance** — Job requires accepting criticism and dealing calmly and effectively with high stress situations. |
| 49% | **Social Orientation** — Job requires preferring to work with others rather than alone, and being personally connected with others on the job. |

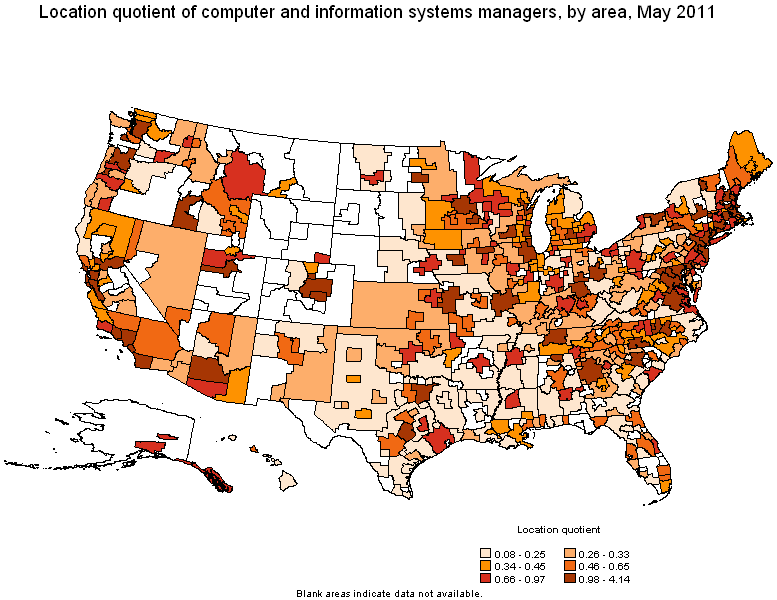
**Work Values**

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| **Extent** | **Work Value** |
| 92% | **Working Conditions** — Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions. |
| 78% | **Support** — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical. |
| 72% | **Achievement** — Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement. |
| 72% | **Recognition** — Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status. |
| 67% | **Independence** — Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy. |
| 56% | **Relationships** — Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service. |

Citations

"Computer and Information Systems Manager: Career Information." *Career Planning*. about.com, 2012. Web. 9 May 2012. <http://careerplanning.about.com/od/occupations/p/comp\_sys\_mgr.htm>.

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<http://www.bls.gov/oes/current/oes113021.htm>

