



# COMPUTER SCIENCE & INFORMATION TECHNOLOGY

**Bachelor of Science: Computer Science**

**Bachelor of Science: Information Technology**

**Minor: Computer Science, Information Technology, Game Development and Web Development**

The Bachelor of Science degree in Computer Science is a traditional computer science degree. It focuses on the fundamentals for computer science and application developments. Students who receive a degree in Computer Science may choose to work in a variety of areas after graduation, such as application development, software engineering and software support, or go on to graduate school. The Bachelor of Science in Information Technology focuses on the broader technology areas of computer science, including design, development, implementation, support and management of computer-based information systems. Upon graduation, these students may choose to work as security specialists, network managers or technicians, system administrators or web developers. Employers recommend one or more internships to be successful and competitive when entering this field.

## **Career types associated with Computer Science or Information Technology**

*(Is this a good fit for you? Are you...)*

Investigative - "Thinker"

Conventional - "Organizer"

Social - "Helper"

## **Related skills, values, and qualities**

- Ability to adapt to constant change
- Proficiency in reading, writing, and thinking, questioning, analyzing and problem solving
- Ability to think logically and organize
- Proficiency with computers
- Aptitude for accuracy and detail
- Strong math background
- Ability to work under pressure
- Ability to concentrate for long periods of time

## **Courses Computer Science & Information Technology majors typically enjoy**

- Algebra, Trigonometry, Calculus
- Computer Programming
- Computer Science
- Criminal Justice
- Information Technology
- Networking
- Cyber Security
- Web Development

## **Common interests of Computer Science majors**

- Working with computers
- Troubleshooting and repairing electronic equipment
- Completing puzzles or playing games of strategy
- Solving logic problems
- Participating in Computer Science or related clubs
- Working part-time or volunteering in a computer Store/department
- Reading computer or technology publications

## **For more information about the major**

Contact the Computer Science and Information Technology Department, 256 Old Main, 610-683-4340, or visit [www.kutztown.edu/csit](http://www.kutztown.edu/csit)

## **KU Majors related to Computer Science**

Mathematics, Physics, Communication Design, Applied Digital Arts

Investigative students may also be interested in:

Anthropology, Biology, Biochemistry, Chemistry, Criminal Justice, Economics\*, Environmental Science, Geography, Geology, German Studies, History, International Studies\*, Marine Science, Multicultural Studies\*, PA German Studies\*, Political Science, Psychology, Sec Edu- Math/Science, Sociology, Spanish, and Women's Studies\*

\* minor only

# FOUR STEPS TO SUCCESS

EXPLORE

DISCOVER

EXPERIENCE

IMPLEMENT

1<sup>ST</sup> YEAR

- Enroll in the Career Exploration Certificate.
- Attend info sessions to learn about career development and personal branding.
- Take a career assessment to identify and confirm interests.
- Get involved in campus clubs and organizations.
- Develop basic workplace skills through jobs or volunteer work.
- Talk with professors, family, and friends about career ideas.
- Conduct informational interviews with professionals working in fields of interest.
- Develop a relationship with your professors and faculty advisor.

2<sup>ND</sup> YEAR

- Meet with CDC career coach.
- Attend info sessions to learn about resume writing, and externships.
- Confirm your choice of major and consider options for double major or minor.
- Research careers of interest.
- Complete a job shadowing (externship) experience.
- Seek meaningful employment or volunteer work in a field related to your major.
- Explore options for undergraduate research and study abroad.
- Write a resume and have it reviewed by the CDC.
- Manage your online presence.

3<sup>RD</sup> YEAR

- Enroll in the Career Success Certificate.
- Complete an internship and/or undergraduate research.
- Attend info sessions about internships, interviewing, job search strategies, and grad school.
- Build a LinkedIn profile and continue to monitor your online presence.
- Complete a mock interview.
- Build skills through research projects, part-time employment, and volunteer work.
- Participate in Careers Cafe & networking programs.
- Attend internship & job fairs.
- Take on a leadership role in a student organization or work.
- Consider graduate school options and prepare for admissions tests.

4<sup>TH</sup> YEAR

- Attend your senior kick-off and other info sessions to prepare for job search/grad school.
- Update your resume and LinkedIn profile.
- Create cover letter drafts.
- Gain experience through internships and/or undergraduate research.
- Secure references for job/grad school applications.
- Create your "30 second" commercial.
- Meet with CDC to develop job search strategies.
- Research employers.
- Network with professionals through events and social media.
- Join a professional organization in your discipline.
- Attend the senior etiquette dinner.
- Participate in job fairs and on-campus interviewing.

## Sample Career Titles

Computer Science or Information Technology majors can be found working in a wide variety of career fields. Here are just some career titles that may be of interest. Please note that some jobs may require further education and training.

To learn more about these careers, visit <http://online.onetcenter.org> or [www.bls.gov/oco](http://www.bls.gov/oco).

Application/Programmer  
 Communications Specialist  
 Computer Consultant  
 Computer Engineer  
 Computer Facilities Manager  
 Computer Installation Specialist  
 Computer Marketing/Sales  
 Computer Operator  
 Computer Security Analyst  
 Computer Service Technician  
 Computer Systems Analyst  
 CQI Production Manager  
 Cryptographer/Cryptologist  
 Cybersecurity  
 Database Analyst/Administrator  
 Data Communications/Security Analyst  
 Distribution Manager  
 Educator/Trainer  
 Employee Relations Specialist  
 End-User Computing Manager/ Technician

Engineering Lab Technician  
 Environmental Technologist  
 Hardware Sales/Service Person  
 Information Scientist  
 Information Systems Developer  
 Information Systems Manager  
 Information Technology Manager  
 Internet Developer  
 Market Analyst  
 ISO Specialist  
 LAN/Logistics Manager  
 Materials Controller  
 Meteorologist  
 Network Administrator/Manager  
 On-Line Services Manager  
 Operating Systems Programmer  
 Operations Manager/Analyst  
 PC Support Specialist  
 Product Development/Line Manager  
 Product Forecaster/Estimator

Production Scheduler/Planner  
 Production Support Specialist  
 Programmer: Engineering & Sci.  
 Software Development Specialist  
 Software Engineering Specialist  
 Software Package Developer  
 Software Salesperson  
 Software Support Tech/Specialist  
 Systems Administrator/Analyst  
 Systems Consultant  
 Systems Programmer  
 Systems Technical Manager  
 Technical Sales/Support Rep.  
 Technical Writer  
 Technology Consultant  
 Telecommunications Manager  
 Urban Planner  
 User Support Analyst  
 Value Engineer  
 Web Master

## Common Internship Sites and Employers

Computer Science and Information Technology majors often find internships and employment in the following fields/industries.

- Banks & Investment Firms
- Business & Industry
- Colleges/Universities
- Consulting Firms
- Federal, State & Local
- Healthcare
- International Agencies
- Manufacturing
- Military
- Research & Development
- Telecommunications



Handshake is the primary online resource for preparing and connecting students and alumni with employers.  
[www.kutztown.edu/handshake](http://www.kutztown.edu/handshake)

## Useful Websites for Computer Science & Information Technology Majors

Whether you are researching related career fields, applying for internships or jobs, or planning to join a professional association, these websites are for you!

### Industry Information & Job/Internship Search Sites

Computer Jobs  
[www.computerjobs.com](http://www.computerjobs.com)

Computer Work  
[www.computerwork.com](http://www.computerwork.com)

Dice  
[www.dice.com](http://www.dice.com)

Internet Society  
[www.internetsociety.org](http://www.internetsociety.org)

Just Tech Jobs  
[www.justtechjobs.com](http://www.justtechjobs.com)

Tech America  
[www.techamerica.org](http://www.techamerica.org)

LinkedIn Jobs  
[www.linkedin.com/jobs](http://www.linkedin.com/jobs)

### Professional Associations

American Society for Info Science & Technology  
[www.asist.org](http://www.asist.org)

Association for Computing Machinery  
[www.acm.org](http://www.acm.org)

Association of IT Professionals  
[www.aitp.org](http://www.aitp.org)

Association for Women in Computing  
[www.awc-hq.org](http://www.awc-hq.org)

Computing Research Association  
[www.cra.org](http://www.cra.org)

Computer Society  
[www.computer.org](http://www.computer.org)

IT Association of America  
[www.itaa.org](http://www.itaa.org)

Institute of Electrical & Electronics Engineers  
[www.ieee.org](http://www.ieee.org)

International Assoc. for Technology in Education  
[www.iste.org](http://www.iste.org)

# Building Your Resume for a Career in Computer Science

Building a strong resume for your career field starts long before you ever start your job search. Employers want to hire graduates who not only have the necessary educational background but also have experience applying that knowledge.

## Caitlin Computer-Science

ccomp000@live.kutztown.edu, 555-555-5555

### TECHNICAL COMPETENCIES

- Operating Systems: Windows, Linux
- Programming Languages: C++, Java, Python
- Web Languages: HTML, JQuery, PHP

### QUALIFICATIONS

- Fluent in Spanish and English
- Experience communicating with diverse populations
- Strong interpersonal and problem solving skills

Learn more about your field and develop the necessary skills for employment by gaining hands-on experience through clinical practice.

### EDUCATION

B.S. Kutztown University of Pennsylvania  
Major: Computer Science/Software Development  
GPA: 3.73  
Dean's List

Kutztown, PA  
Dec 20xx

Fall 20xx-Spring 20xx

Related Courses: Web Programming, Java Programming, Programming Languages, Operating Systems, Software Engineering, Web-based Software Design and Development, Human Computer Interaction

### INTERNSHIP & EXTERNSHIP EXPERIENCE

Computer Aid, Inc.

Programming and Development Intern

- Assisted with code development for tax processing system
- Tested and debugged various applications
- Created code documentation
- Presented group code summary project at annual company seminar

Allentown, PA  
Spring 20xx

Student Extern

- Observed process of code development and troubleshooting techniques
- Attended "Tech Talk" focused on analysis and design for new applications

Sept 20xx

Utilize summer breaks to acquire valuable experience via volunteer or employment opportunities related to your major.

### RELATED EXPERIENCE

Kutztown University ResNet Helpdesk

Student Support Staff Member

- Assist with Adware/Spyware and Trojan removal
- Perform anti-virus installation, system updates and system restorations
- Complete troubleshooting tasks related to data recovery and printer/scanner issues
- Aide in security procedures such as student password changes
- Communicate effectively with ResNet staff and students

Kutztown, PA  
Fall 20xx-Present

### CAMPUS INVOLVEMENT & PROFESSIONAL DEVELOPMENT

Member, Kutztown Technology Association

Member, Phi Kappa Phi National Honors Fraternity

Member, American Computer Scientists Association (ACSA)

Volunteer, Special Olympics, Kutztown University

Recipient, Career Success Certificate, Kutztown University Career Development Center

Recipient, Career Exploration Certificate, Kutztown University Career Development Center

Fall 20xx-Present

Fall 20xx-Present

Fall 20xx-Present

Spring 20xx & 20xx

Spring 20xx

Fall 20xx

Develop professionally through campus involvement and professional memberships. This illustrates responsibility, leadership abilities and time management skills.

### WORK EXPERIENCE

Best Buy

Sales Consultant

- Answered technology-related inquiries regarding desktops, laptops and tablets
- Communicated with diverse staff to provide positive customer experience
- Resolved issues and complete customer returns

Wyomissing, PA  
Summers 20xx-20xx

