Computer Science

Overview

Major in computer science and you become an experienced problem solver who is well-versed in computing theory and familiar with a variety of programming paradigms. You gain substantive research experience and learn how to think independently. The major integrates seamlessly with the College’s liberal arts curriculum and many students double major in areas as diverse as biology, music, psychology and art. Some also pursue their studies with the College’s Ammerman Center for Arts & Technology. Whether your experience with computers is minimal or extensive, the Computer Science Department encourages you to learn, be challenged and have fun.

Research Opportunities

Research is a priority for computer science majors. It allows you to immerse yourself in a topic of interest, contribute to the advancement of the field and prepare for graduate studies and future employment. Recent topics include virtual reality way-finding experiments, game agent learning, robot colony experiments, image and sound processing, algorithms for routing and scheduling, and work on the Humanitarian FOSS (free and open source software) project. Students have presented their work at conferences across the globe. You are expected to complete at least two semesters of research.

Facilities

If you're doing research or taking an advanced course, you have 24/7 access to campus labs. Facilities include standard UNIX and PC labs, as well as labs in robotics, networks, virtual reality and digital signal processing. The robotics lab is equipped with workstations, robots and a colony space. The virtual reality and signal processing lab has high-end graphics PCs, head-mounted displays, 3D trackers, force feedback devices, development environments for multimedia content processing and software for producing high-end animations and graphics.
Faculty

Christine Chung, Jean C. Tempel ’65
Assistant Professor of Computer Science
B.A., M.Eng., Cornell University; M.A., Columbia University Teachers College; Ph.D., University of Pittsburgh
Algorithm design and analysis; algorithmic game theory

Ozgur Izmirli, Associate Professor of Computer Science
B.S., M.S., Ph.D., Middle East Technical University
Content analysis of music audio; music information retrieval; music perception and cognition modeling; multimodal computer-user interfaces

Gary Parker, Professor of Computer Science; Chair of Computer Science Department
B.A., University of Washington; M.S., Naval Postgraduate School; Ph.D., Indiana University
Artificial intelligence; cognitive science; colony robotics; autonomous agent learning; evolutionary robotics; genetic algorithms; multilegged robots; interactive video games

Stephen Winters-Hilt, Visiting Associate Professor
B.S., M.S., California Institute of Technology; Ph.D., University of Wisconsin; Ph.D., UCSC
Bioinformatics; machine learning; genome analysis; signal processing; pattern recognition; nanopore detector cheminformatics

S. James Lee, Assistant Professor of Computer Science
B.S., M.S., Yonsei University, Korea; M.F.A., Ph.D., Computer Science and Electronic Visualization Laboratory (EVL), University of Illinois at Chicago
Computer graphics and visualization for interactive applications such as computer games, virtual reality environments, autonomous interactive characters, and museum installations; avatars

Selected Courses

Introduction to Computer Science and Problem Solving; Data Structures; Computer Organization; Algorithms; Computer Networks; Operating Systems; Graphics and Virtual Reality; Digital Design; Multimedia; Machine Learning and Data Mining; Robotics; Bioinformatics; Digital Sound Processing; Artificial Intelligence; Computational Intelligence

About Connecticut College

Connecticut College is a private, highly selective liberal arts college with 1,850 students and more than 40 majors in the arts, sciences, social sciences and humanities, and the option for students to self-design majors. The College offers a high level of intellectual challenge, and a campus culture that supports students to tailor their educational experience to their own interests and goals. A four-year career development program teaches students how to translate a liberal arts degree into a first job or graduate school admission. Connecticut College is situated in the small New England seaport of New London.

WHAT CAN YOU DO WITH A MAJOR IN COMPUTER SCIENCE?

Software Engineer, Amazon.com
Calc Engine Analyst, Hewitt Associates
Consumer Analytics, PepsiCo Inc.
Senior Security Researcher, FireEye Inc.
Software Test Developer, Aircell
Computer Programmer, Amazon.com
Business Intelligence Consultant, GNA Software Consulting
Engineer, United Technologies Research Center
Applications Consultant, Veson Nautical Corp.
Software Developer, Jibunu
Application Developer, Nevo Technologies Inc.
Engineer, TripAdvisor
Sales Technical Operations Specialist, Google Inc.
Technology Analyst, Museum of Science
Tech Support Analyst, Bullhorn

EXAMPLES OF STUDENT RESEARCH IN COMPUTER SCIENCE

Gyanendra Sharma ’13
Score following: aligning sheet music to audio recordings
Evan Gray ’13, Jesse Newbold ’13, Jim O’Connor ’13, Sophia Corsaro ’15, Matt Burns ’15
Xpilot-AI development

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