

# INFORMATION SYSTEMS (IS)

Where technology meets the real world.

Carnegie Mellon University's Information Systems (IS) program is an internationally recognized undergraduate major that educates students to lead change at the interfaces of technological, organizational and societal systems. Graduates of the Information Systems program are ideally situated to take a leading role in shaping our information-based future.

Information Systems is a unique and innovative program in the Dietrich College of Humanities and Social Sciences. Students completing the program will be well grounded in the fundamentals of organization theory, decision-making, teamwork, leadership, research methods and emerging information systems technologies.

## GRADUATED CLASS – SPRING 2020

**86**  
GRADUATED  
CLASS



### IS Admitted Students Averages

SAT-ERW	SAT-M	ACTE	ACTM	ACTC
740-760	780-800	35-36	35-36	35

Middle 50% ranges

### Popular First-Year Courses

- > The Information Systems Milieux
- > Principles of Computing
- > Reasoning with Data
- > Fundamentals of Programming and Computer Science
- > Interpretation and Argument
- > Grand Challenge Seminar
- > Global Histories

## PROGRAMS

### Information Systems

Concentrations provide students with an opportunity to gain depth in a focused area.

#### Concentrations include:

Data Science

Digital Media Analytics

Information Security and Privacy

#### IdeATe Content Areas

Animation and Special Effects

Design for Learning

Game Design

Innovation and Entrepreneurship

Intelligent Environments

Media Design

Physical Computing

Soft Technologies

Sonic Arts

## FACULTY

Faculty interests include:

### Big Data and Analytics

WEB APPLICATION SECURITY

Intelligent Agents

Inclusion and Broadening Participation

USER-CENTERED DESIGN

IT for Development

Mobile Computing

PUZZLE-BASED LEARNING

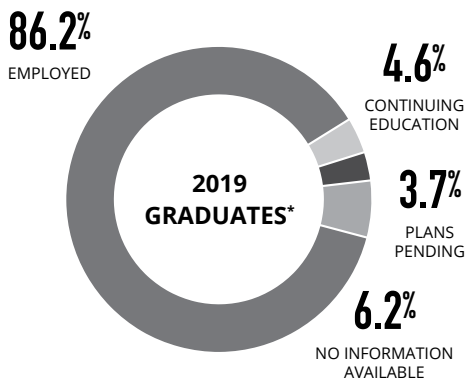
E C O - S U S T A I N A B I L I T Y

Global Systems Management

### Notable Faculty

- > **Susan Hagan**, Associate Teaching Professor, Information Systems
- > **C.F. Larry Heimann**, Teaching Professor, Information Systems
- > **Divakaran Liginlal**, Teaching Professor, Information Systems
- > **Joseph S. Mertz Jr.**, Teaching Professor, Information Systems & Heinz College; Director of the Undergraduate Information Systems Program
- > **Sara Moussawi**, Assistant Teaching Professor, Information Systems
- > **Jeria Quesenberry**, Teaching Professor, Information Systems
- > **Raja Sooriamurthi**, Teaching Professor, Information Systems
- > **Randy S. Weinberg**, Teaching Faculty Emeritus, Information Systems

## GRADUATE SUCCESS



\*Percentages recorded as of January 2020

### Top Employers



## FACULTY RESEARCH



### Inclusion and Broadening Participation

Efforts have focused on improving the pipeline and encouraging women and minorities to see themselves in the information systems field. Teaching Professor Jeria Quesenberry and other researchers at Carnegie Mellon University are at the forefront of studies that show how men and women relate to technology through a spectrum of attitudes and with more similarities than differences. In other words, cultural factors play an important role in providing insights that will help more programs — and ultimately the profession — become more inclusive.



### Intelligent Agents

Every day, more users are sharing intimate details of their lives with intelligent agents, such as Apple's Siri and Amazon's Alexa. Given the rapid pace at which these agents are both being developed and integrated into personal lives, our understanding of their impact needs to evolve equally fast. Researchers at Carnegie Mellon, including Assistant Teaching Professor Sara Moussawi, are on the leading edge of studying the behavioral and ethical implications of our interaction and dependence on these newfound digital friends.



### Machine Learning for Computing Systems

Supercomputers have extremely complex hardware and software configurations. Teaching Professor Raja Sooriamurthi and IS faculty in conjunction with researchers at the Pittsburgh Supercomputing Center are investigating machine learning techniques to analyze system execution and diagnose suboptimal performance based on system logs.

## STUDENT PROJECTS IMPACT THE WORLD

### 1. Phipps Conservatory and Botanical Gardens

The reach of Information Systems students goes beyond Carnegie Mellon University's campus. Students have created in-depth projects for numerous companies and organizations in Pittsburgh, including Phipps Conservatory and Botanical Gardens. From an interactive, well-designed and sustainable experience to educate visitors about climate change to optimizing data organization, Information Systems students have been instrumental in technological advances of Pittsburgh companies.

### 2. The Kodiak Lab

Students recently worked with the National Oceanic and Atmospheric Administration's (NOAA) Shellfish Assessment Program in Kodiak Island, Alaska. The Kodiak Lab is

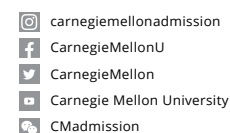
assessing the distribution and abundance of commercially caught crabs in the eastern Bering Sea. Students developed a web application that imports crab image files, does image processing on them, and uses the images in a game to crowdsource analyzing the crab data.

### 3. Technology Consulting in the Global Community (TCinGC)

TCinGC is a 10-week summer internship that sends students around the globe to help developing communities. Through TCinGC, students have made a positive difference in 14 countries, including an implemented courseware system in a Rwandan orphanage, a website for a community college in Palau, and a database to counter money laundering in the Marshall Islands.

## Carnegie Mellon University

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