# Admitted Student Mock Class


**Sarah Tasneem, PhD**

**Professor and Chairperson, Computer Science**

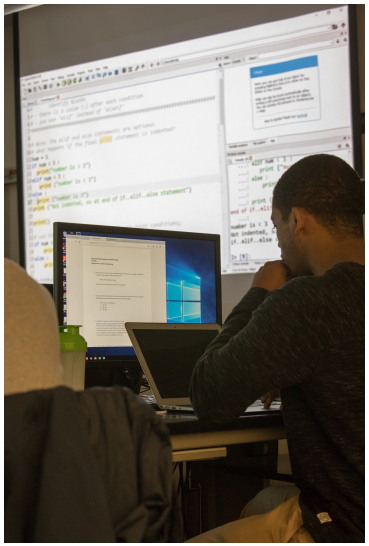
tasneems@easternct.edu

**Garrett Dancik, PhD**

**Associate Professor, Computer Science**

dancikg@easternct.edu

http://gdancik.github.io/ASDD/


**Eastern Connecticut State University**

**Department of Computer Science**

EASTERN
CONNECTICUT STATE UNIVERSITY

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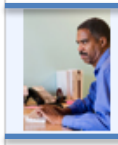
Visitors | Future Students | Current Students | Alumni and Friends | Faculty and Staff

# Occupational Outlook – Data from the Bureau of Labor Statistics

(http://www.bls.gov/ooh/computer-and-information-technology/home.htm)

| | OCCUPATION | JOB SUMMARY | ENTRY-LEVEL EDUCATION | 2012 MEDIAN PAY | Projected Growth (2022) |
|---|---|---|---|---|---|
|  | Computer and Information Research Scientists | Computer and information research scientists invent and design new approaches to computing technology and find innovative uses for existing technology. They study and solve complex problems in computing for business, medicine, science, and other fields. | Doctoral or professional degree | $102,190 | Faster than average |
|  | Computer Network Architects | Computer network architects design and build data communication networks, including local area networks (LANs), wide area networks (WANs), and intranets. These networks range from a small connection between two offices to a multinational series of globally distributed communications systems. | Bachelor's degree | $91,000 | Faster than average |
|  | Computer Programmers | Computer programmers write code to create software programs. They turn the program designs created by software developers and engineers into instructions that a computer can follow. | Bachelor's degree | $74,280 | Average |
|  | Computer Support Specialists | Computer support specialists provide help and advice to people and organizations using computer software or equipment. Some, called computer network support specialists, support information technology (IT) employees within their organization. Others, called computer user support specialists, assist non-IT users who are having computer problems. | See How to Become One | $48,900 | Faster than average |
|  | Computer Systems Analysts | Computer systems analysts study an organization's current computer systems and procedures and design information systems solutions to help the organization operate more efficiently and effectively. They bring business and information technology (IT) together by understanding the needs and limitations of both. | Bachelor's degree | $79,680 | Much faster than average |

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|  | Database Administrators | Database administrators (DBAs) use specialized software to store and organize data, such as financial information and customer shipping records. They make sure that data are available to users and are secure from unauthorized access. | Bachelor's degree | $77,080 | Faster than average |
|  | Information Security Analysts | Information security analysts plan and carry out security measures to protect an organization's computer networks and systems. Their responsibilities are continually expanding as the number of cyberattacks increase. | Bachelor's degree | $86,170 | Much faster than average |
|  | Network and Computer Systems Administrators | Computer networks are critical parts of almost every organization. Network and computer systems administrators are responsible for the day-to-day operation of these networks. | Bachelor's degree | $72,560 | Average |
|  | Software Developers | Software developers are the creative minds behind computer programs. Some develop the applications that allow people to do specific tasks on a computer or other device. Others develop the underlying systems that run the devices or control networks. | Bachelor's degree | $93,350 | Much faster than average |
|  | Web Developers | Web developers design and create websites. They are responsible for the look of the site. They are also responsible for the site's technical aspects, such as performance and capacity, which are measures of a website's speed and how much traffic the site can handle. They also may create content for the site. | Associate's degree | $62,500 | Faster than average |


- The Computer Science degree program at Eastern Connecticut State University provides students the **foundations and skills for future work and careers in computing**.

- Upon graduation, students will:

  - Possess **practical and theoretical knowledge of computer science** sufficient to work professionally and contribute to the regional and global economic development.
  - Be able to **apply computational techniques to design and implement solutions to real-world problems**.
  - Be prepared **for advanced education in computer science and continued professional development**.
  - Possess the skills and the intellectual abilities that will enable them to **adapt in the ever-changing field of computer science**.

# Computer Science Major: BS Degree Requirements

- **CSC 180 Fundamentals of Computing - 3 credits**
  **CSC 210 Computer Science and Programming I - 3 credits**
  **CSC 231 Computer Science and Programming II - 3 credits**
  **CSC 270 Data Structures - 3 credits**
  **CSC 320 Computer Architecture - 3 credits**
  **CSC 335 Algorithm Design and Analysis - 3 credits**
  **CSC 341 Database and Information Management - 3 credits**
  **CSC 401 Networking and Distributed Computing - 3 credits**
  **CSC 440 Operating Systems - 3 credits**
  **CSC 445 Software Engineering - 3 credits**
  **CSC 450 Senior Research - 3 credits**

- **MAT 230 Discrete Structures/CSC 230 Discrete Math for Computer Sc - 3 credits**
  **MAT 243 Calculus I with Technology - 4 credits**

- **Subtotal** - 40 credits


- **Minors:**
  - Computer Science
  - Computer Engineering
  - Game Design
  - Management Information Systems
  - Bioinformatics

## Elective courses

- Adv Web Develop & Scraping
- Data Science
- Data Mining and Applications
- Bioinformatics
- Genomics
- Cybersecurity
- ASP .NET
- Big Data Programming and Management
- Artificial Intelligence
- Mobile Computing
- Networking & Distributed Computing
- Numerical Analysis
- Visual Basics
- …….

## Values of CS at Eastern

- Small class size-20
- Smart class rooms and lab facilities dedicated to CS majors
- Student tutors
- Student Internship-Cigna, Travelers, DXC, Electric Boat
- Independent study
- CS student club

# Covid-19 and Computer Science

Sudden shift to remote and distance work- dire need for

- technical support by **computer science,**
- **cybersecurity** professionals to secure networks and personnel activities.

LinkedIn job posting within the past 30 days

- **Cybersecurity**
- **IT and Services**
- **Computer Software**

The **World Economic Forum-AI specialists** as the number one emerging data job in the future.

**Robots** could disinfect high-touch surfaces in hospitals, reducing risk to those workers.

**Machine and Deep Learning** and - classification algorithms would be useful to distinguish the affected cases from unaffected ones

# Covid-19 and Computer Science

- **Cryptography:** securing authentic data in different websites such as affected, unaffected, susceptible areas, and so on.

- **App development** (AI algorithms) to help with contact tracing, testing, warning about a hotspot

- **CDC job posting:** Formulate and apply the foundations and concepts of computer science to address complex public health problem