

Computing careers

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UNSW
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Overview

Computing landscape

Study disciplines

Career opportunities

Q & A

A Computing Curricula Series Report
2020 December 31

Computing Curricula 2020

CC2020

Paradigms for Global Computing Education

encompassing undergraduate programs in

Computer Engineering

Computer Science

Cybersecurity

Information Systems

Information Technology

Software Engineering

with data science



Association for
Computing Machinery



This talk draws upon Chs. 2, 3 & 8
of this report

Search for “cc2020” to [access PDF](#)

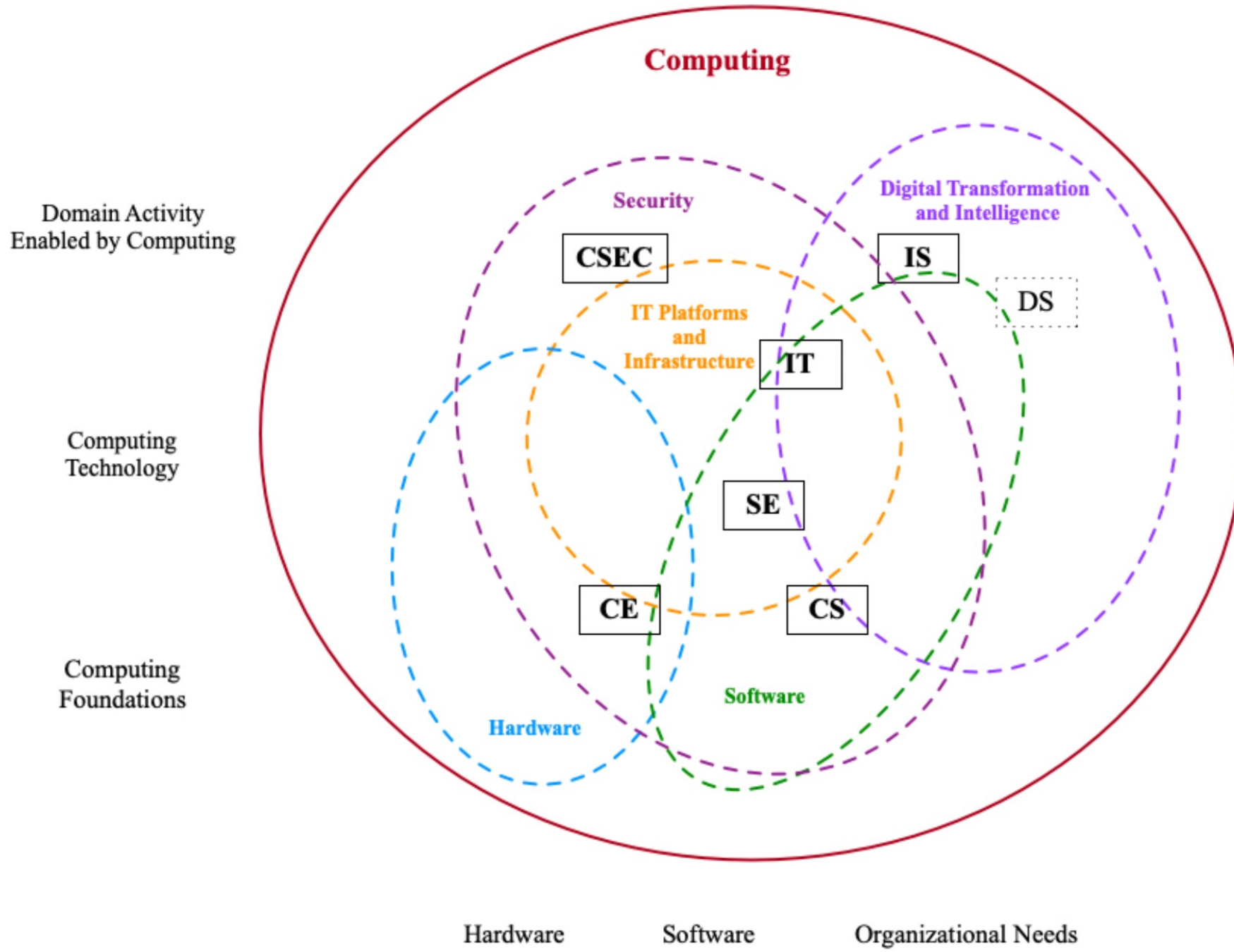


Figure 2.2. A contemporary view of the landscape of computing education

Legend: Curricular reports: CE=computer engineering; CS=computer science; CSEC=cybersecurity; IS=information systems; IT=information technology; SE=software engineering; DS=data science (under development).

Distinguishing computing disciplines

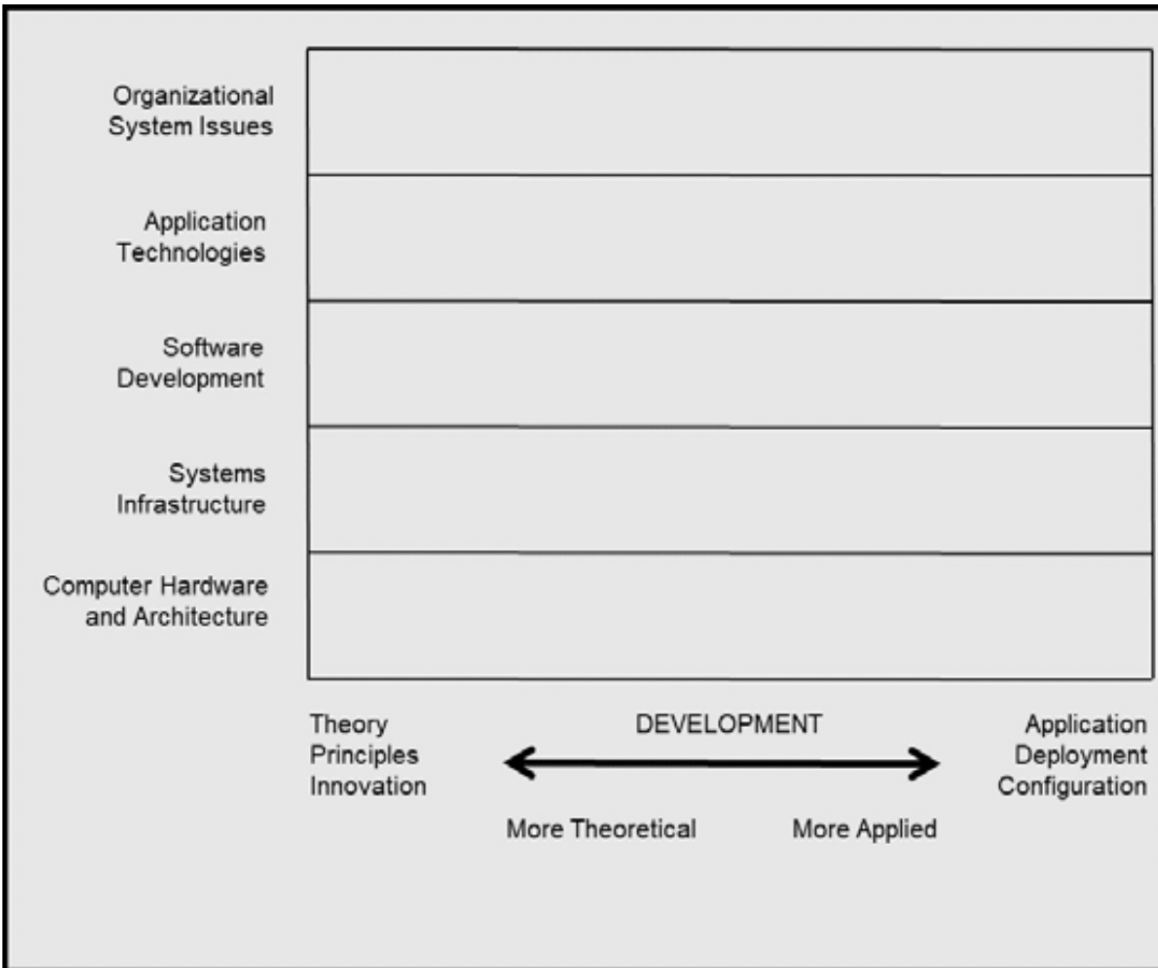


Figure 3.1. Problem Space Framework (CC2005)

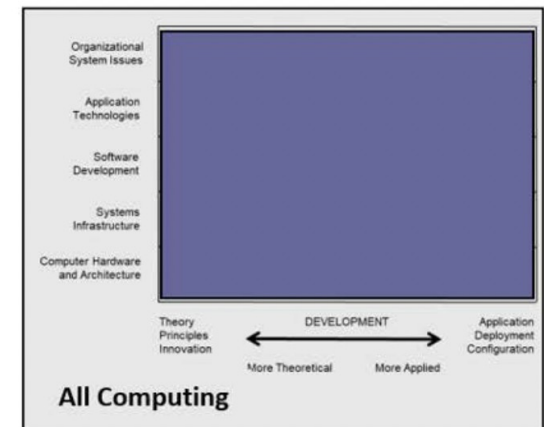
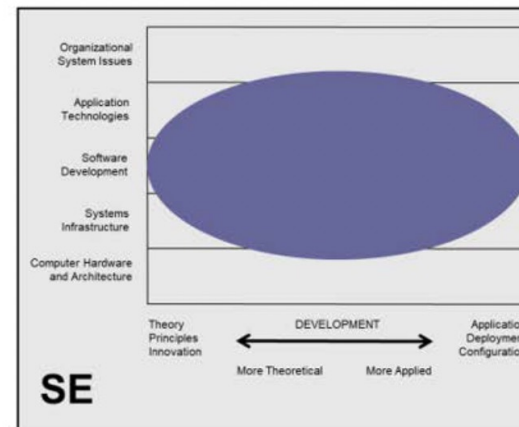
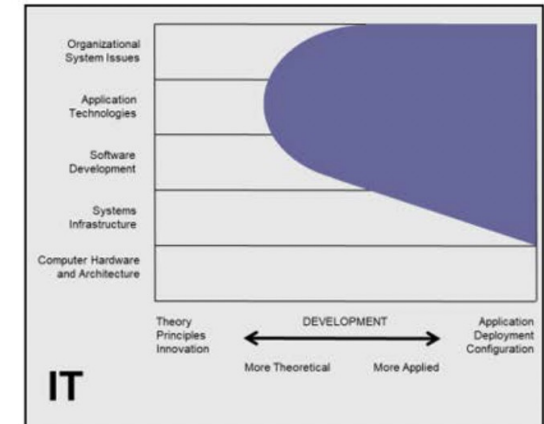
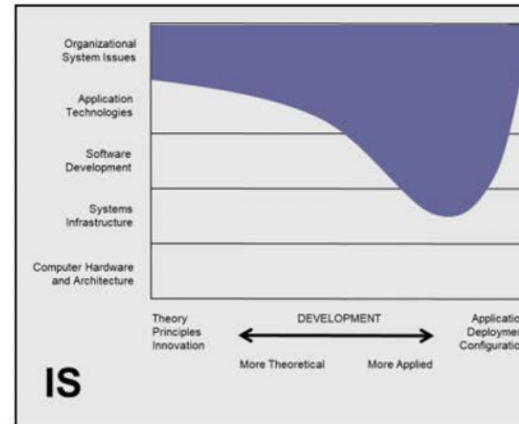
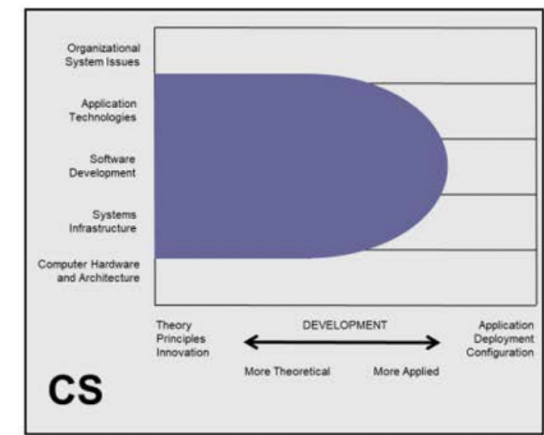
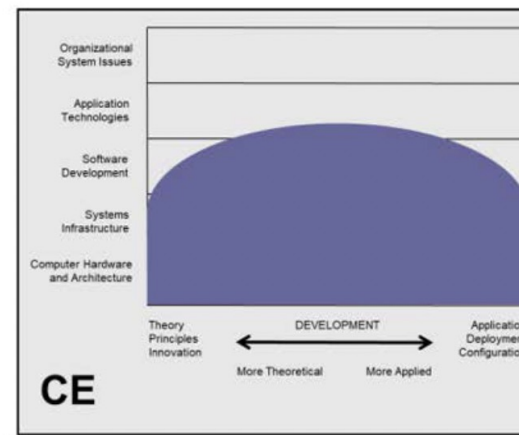


Figure 3.2 Visuals from CC2005

Possible careers (just one or two of many)

Human
↑
↓
Hardware

Technology focussed

CSEC

- Ensuring the security of information systems and their data

SE

- Developing and implementing application systems

CS

- Creating new uses for computer technology

CE

- Designing and maintaining hardware or embedded systems

Business focussed

IS

- Conceiving information systems to help businesses perform

DS

- Understanding business data

IT

- Configuring information systems infrastructure

Technical/Theoretical



Practical/Applied

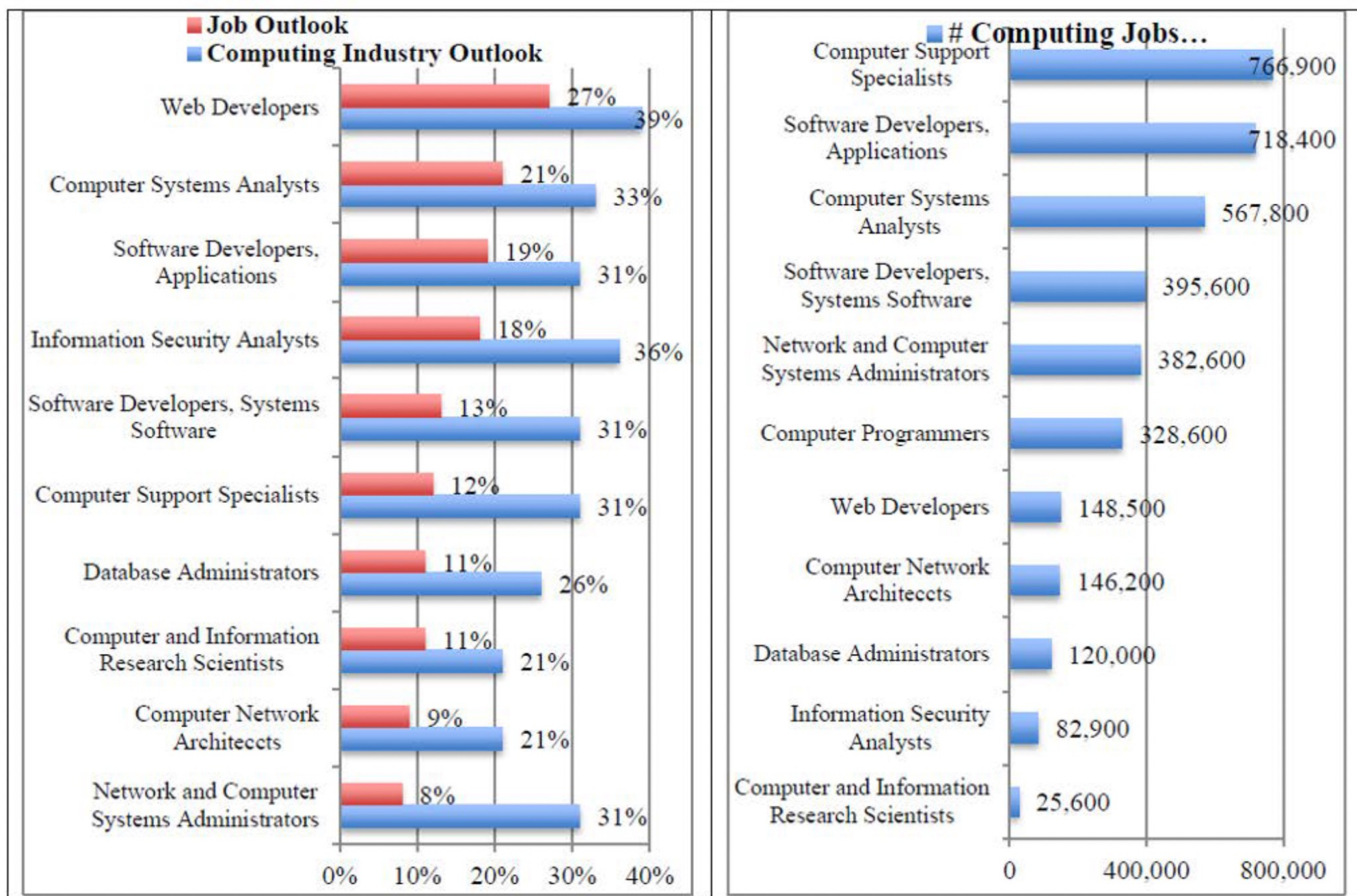


Figure 3.3. Left: Computing occupations projected growth 2014-2024 across all sectors (job outlook) and in the computing sector. Right: Computing jobs in 2014. (Courtesy of Bureau of Labor Statistics)

Emerging computing areas

- Digital experience and ambient computing
- Cognitive technologies and robotics
- Quantum computing
- Distributed ledger (blockchain)
- Digital privacy and ethics

Find out more:

[Computer Science & Engineering at UNSW](#)

[Information Systems & Technology Management at UNSW](#)