

# IT & Computing Careers

A guide to careers in IT & Computing



University of  
South Australia

## SOFTWARE ENGINEERING

- > Develop a broad understanding of computing and IT theory and practice
- > Train with the latest technologies and tools in the on-campus IT Development Studio and IT Innovation Studio
- > Set yourself apart from other undergraduates with an honours degree



**Graduate Software Engineer**  
Boeing Defence Australia  
Swetha Krishnagopal

“UniSA has provided me with all the relevant knowledge and hands-on experience I needed before entering the workforce and it’s given me a solid foundation for a career in software engineering.”

## GAMES & ENTERTAINMENT

- > Apply technical skills and creativity to game-type productions, software and interfaces
- > Learn to develop new and exciting applications for different industries and markets with the latest technologies, such as VR
- > Learn with the latest industry-standard technologies and tools in the IT Development Studio, IT Innovation Studio and Game Lab



**Digital Artist & Software Developer**  
JumpgateVR  
Billy Bizilis

“I always dreamt of designing and developing video games, although I thought this was unachievable.

With all the experience I gained at UniSA, I soon realised I had all the opportunity in the world to pursue this career. UniSA has given me access to the industry, vital connections and a career path to follow.”

## NETWORKING & CYBERSECURITY

- > Focus on the security of information systems in contemporary IT systems
- > Be at the forefront of security intelligence, finding new ways to combat escalating cyber-attacks and defending against spamming, Malware, viruses and other threats
- > Prepare for industry certification exams in CISCO CCNA and CCNP as part of your degree



**Team Leader Network**  
Data Action  
Jane Hocking

“I chose UniSA as it offered the IT specialisation that I wanted to study.

I now work in a fast-paced corporate environment that provides many opportunities for advancement in a field where technology is constantly changing.”

## DATA SCIENCE

- > Learn to solve complex problems through quantifying and understanding data
- > Study a balanced mix of mathematics, information technology and data science
- > Benefit from the opportunity to undertake the Maths Clinic program in your final year



**ICT Cybersecurity Assessor**  
Royal Australian Air Force  
Kevin Williams

“There has been huge growth recently in data jobs and roles, as we discover just how much benefit data analysis can give.

I was able to put the concepts and techniques I learnt at UniSA into practice immediately – both in my main job and in my sideline work of small business consultancy.”

# WHERE CAN MY DEGREE TAKE ME?



Science, technology, engineering and mathematics (STEM) knowledge is associated with 75% of the fastest growing occupations, innovations and wage premiums.

CSIRO, Tomorrow's Digitally Enabled Workforce report, 2016.



The Internet of Things is about to boom, with 1.5 million devices and smart objects with cellular connections expected by 2022.

Internet of Things forecast, Ericsson Mobility Report Q2 2018.



More than 25 million jobs will be created around big data in the next 15 years.

PwC's Skills for Australia, Information and Communications Technology Industry Skills Forecast, 2017.



## BACHELOR OF SOFTWARE ENGINEERING (HONOURS)

### STUDY CORE FOUNDATIONS IN:

- > Artificial intelligence and machine learning
- > Cloud programming
- > Software design and development
- > IT languages

### CAREER OPPORTUNITIES:

- > Software engineer
- > Test manager
- > Software developer
- > iOS developer
- > Programmer
- > Software architect
- > IT project lead

### YOU COULD:

- > Tailor your electives to stand out in your career pathway



## BACHELOR OF INFORMATION TECHNOLOGY (GAMES AND ENTERTAINMENT DESIGN)

### STUDY SPECIALIST COURSES IN:

- > Game design and development
- > System design
- > Information visualisation

### CAREER OPPORTUNITIES:

- > Game designer
- > Android and iOS developer
- > Mobile games developer
- > Video game designer
- > Video game system designer
- > Game programmer
- > Web developer
- > Multimedia specialist

### YOU COULD:

- > Create a game as part of your degree, showing potential employers what you can do



## BACHELOR OF INFORMATION TECHNOLOGY (NETWORKING AND CYBERSECURITY)

### STUDY SPECIALIST COURSES IN:

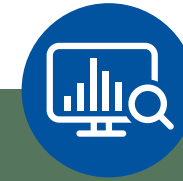
- > Digital forensics
- > Cloud, virtualisation and storage
- > Network security and architecture

### CAREER OPPORTUNITIES:

- > Cybersecurity analyst
- > Network administrator
- > Network engineer
- > Cybersecurity consultant
- > Cybersecurity governance manager
- > Policy adviser
- > IT service delivery manager

### YOU COULD:

- > Go on to study the Master of Cybersecurity and become a specialist in your area



## BACHELOR OF MATHEMATICS (DATA SCIENCE)

### STUDY CORE FOUNDATIONS IN:

- > Calculus and statistics
- > Fundamentals of programming
- > Mathematical communication and modelling
- > Web development and data structures

### CAREER OPPORTUNITIES:

- > Data scientist
- > Data analyst
- > Business intelligence analyst
- > Data architect
- > Data mining engineer
- > Visualisations designer
- > Data consultant
- > Big data engineer
- > Big data researcher
- > Teacher - with further study

### YOU COULD:

- > Pair this program with a Master of Teaching (Secondary) to become a mathematics teacher