Computer Science

As a specialisation or an enabler
As a specialisation

- Programming
- Networking and Security
- Games
- Information Systems
As an enabler

All businesses need:
- Products
- Customers
- Accounting/Finance
- ICT and Computer Science
So how can your students get involved?

By choosing majors, second majors, co-majors or minors
Swinburne Computer Science majors

- Software development
- Games development
- Software design
- Network design
- Cybersecurity
- Data science
## Second major examples

<table>
<thead>
<tr>
<th>Major</th>
<th>Second major</th>
<th>Potential job outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development</td>
<td>Games Development</td>
<td>Software developer or games developer</td>
</tr>
<tr>
<td>Software Development</td>
<td>Software Design</td>
<td>Computer scientist, software architect, researcher</td>
</tr>
<tr>
<td>Network Design</td>
<td>Cybersecurity</td>
<td>Network infrastructure specialist, white-hat hacker, penetration tester, network administrator</td>
</tr>
<tr>
<td>Data Science</td>
<td>Software Design</td>
<td>Data analyst, big data specialist, programmer</td>
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</table>
# Co-major examples

<table>
<thead>
<tr>
<th>Major</th>
<th>Co-major</th>
<th>Potential job outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journalism (Arts)</td>
<td>Computer Science</td>
<td>Blogger, tech journalist</td>
</tr>
<tr>
<td>Digital Advertising Technology (Arts)</td>
<td>Computer Science</td>
<td>Digital marketer, digital producer</td>
</tr>
<tr>
<td>Social Media (Arts)</td>
<td>Computer Science</td>
<td>New social media platform and content</td>
</tr>
<tr>
<td>Information Systems (Business)</td>
<td>Computer Science</td>
<td>ICT manager</td>
</tr>
<tr>
<td>Entrepreneurship and Innovation (Business)</td>
<td>Computer Science</td>
<td>IT/online inventor, Silicon Valley entrepreneur</td>
</tr>
<tr>
<td>Marketing (Business), Digital Media Design (Design)</td>
<td>Computer Science</td>
<td>Digital marketing, freelancer</td>
</tr>
<tr>
<td>Applied Statistics (Health)</td>
<td>Computer Science</td>
<td>Big data manager</td>
</tr>
<tr>
<td>Advertising (Media and Communications)</td>
<td>Computer Science</td>
<td>Digital advertiser</td>
</tr>
<tr>
<td>Applied Mathematics (Science)</td>
<td>Computer Science</td>
<td>Software designer, researcher</td>
</tr>
<tr>
<td>Biotechnology (Science)</td>
<td>Computer Science</td>
<td>Bioinformatician, data analyst</td>
</tr>
</tbody>
</table>
Minors

**Computer science**
- Fundamental studies for future self-learning
- Programming, logic, hardware

**Web development**
- Basics for developing simple web apps
- Programming, web applications, user interface/experience
Why do it?

• Programming, IT and web skills are used in every business and most jobs
• These skills make graduates very employable and complements their primary major – a clear advantage
• Good to know ICT aspects in case you want to buy products or create in-house solutions
It’s part of everything

• Driverless cars
• Paediatric support
• Traffic management
• Dementia training
• Internet of things

Image credit: Steve Jurvetson
The student experience
Computer Science student groups

• Women in ICT
• Swinburne Cyber Security Club
We’re in the real-world

• Host high-profile events and hackathons
• Provide opportunities to apply skills for real-world projects
Authentic assessment

Innovative portfolio model for some units

• No end-of-semester exam
• Students have some choice for assignment topics
• Students prepare examples of work that they can show employers
Questions?