

AUT

A FUTURE IN
**CREATIVE
TECHNOLOGIES**





WHAT IS CREATIVE TECHNOLOGIES?

Creative technologies is where creativity and technology merge to innovate and create new solutions, experiences and products across a broad range of sectors. These include smart and assistive devices for health and mental wellbeing, tactile boardgames for learning to code, augmented reality apps to help vision-impaired people navigate their environment, plastic-free and smart packaging, robots, data management apps, and textiles that monitor people's health. Gamification incorporates public health campaigns, insurance, education and entertainment. AI and machine learning and virtual and augmented reality are all part of potential creative technologies.

Creative technologists bring technical skills and artistic vision into the workplace. They are versatile/multi-talented professionals who possess a "Swiss army knife" of creative skills across different disciplines and can communicate and mediate across those domains. They can work in roles such as interactive design, motion graphics, creative coding, systems innovation or user experience design.

Creative technologists share a creative and inquisitive view of the world. They stay up-to-date with the latest and emerging technology and industry trends, and know how to incorporate them into their projects in innovative ways, using techniques such as programming languages or online tools.

Many creative technologists become entrepreneurs, either due to their passion to break new ground or because their innovative ideas are outside conventional business structures.

Would you be interested in exploring current and future trends and finding creative and practical solutions? Do you have an interest in the evolution of technology and new ways of thinking about and participating in social, cultural, and economic change? Then creative technology might offer you more than a career – it could change your world and the world around you.

OUTLOOK AND TRENDS

The following is a snapshot of some trends impacting on creative technologies.

Immersive experiences

The use of virtual, augmented, and mixed reality is becoming more widespread, allowing for immersive and exciting experiences in areas such as education, construction, art, gaming, and entertainment through sound and moving image production.

AI-powered creativity

The integration of artificial intelligence and machine learning into creative processes is becoming more common. New forms of creative expression and collaboration include the use of AI to generate and edit text, images, photos and video.

Robotics

Increasingly sophisticated artificial intelligence is also being integrated into robots. An increasing number of companies are innovating and producing hundreds of different types of robots for applications in entertainment, agriculture, health, transport and more.

Digital fabrication and 3D printing

Creating a physical object from a three-dimensional digital model and producing these objects in a sustainable way is just part of the challenge for creative technologists working with digital fabrication and 3D printing.

Food technologies and biomaterials

Development is needed in areas such as plastic-free and smart packaging, as well as plant-based food products. Innovations in farming include the use of solar-powered smart collars to manage cow behaviour and drones. There are also innovations in hydroponic gardening and the use of apps for data management.

Wearables

Embedding technology into physical materials, such as nanofibers and wearable computing in textiles, is opening up new advances in areas like health where people can be monitored in real time through the clothes they wear.

Gamification

Play is being used as an engagement strategy in advertising and marketing, as well as in many non-recreational areas such as conflict resolution, public health campaigns, insurance and education. This ongoing growth in gamification of services and communications is generating an ongoing need for creators of original content in New Zealand.

WORK SETTINGS

The field is constantly evolving and new job titles are emerging across various organisations and industries. This includes areas such as health, finance, education and tech businesses, as well as creative industries like architecture, art direction, branding, fashion, graphic design, illustration, industrial design, interaction design, product design, motion graphics and photography.

CAREER ROLE EXAMPLES

The common roles that open up to creative technologies graduates include:

- Interactive designer
- User experience (UX) designer
- User interface (UI) designer
- Motion graphic designer
- Game designer
- Virtual/augmented reality developer
- Front-end developer
- Creative coder
- Systems innovator
- Entrepreneur

Here is more detail on four of these roles:

Creative technologist

Blends creative skills with technology expertise to develop innovative digital solutions and experiences. Uses design thinking, user-centred approaches and technical skills to drive digital transformation and bridge the gap between technology and creativity for tech businesses and other organisations.

Entrepreneur

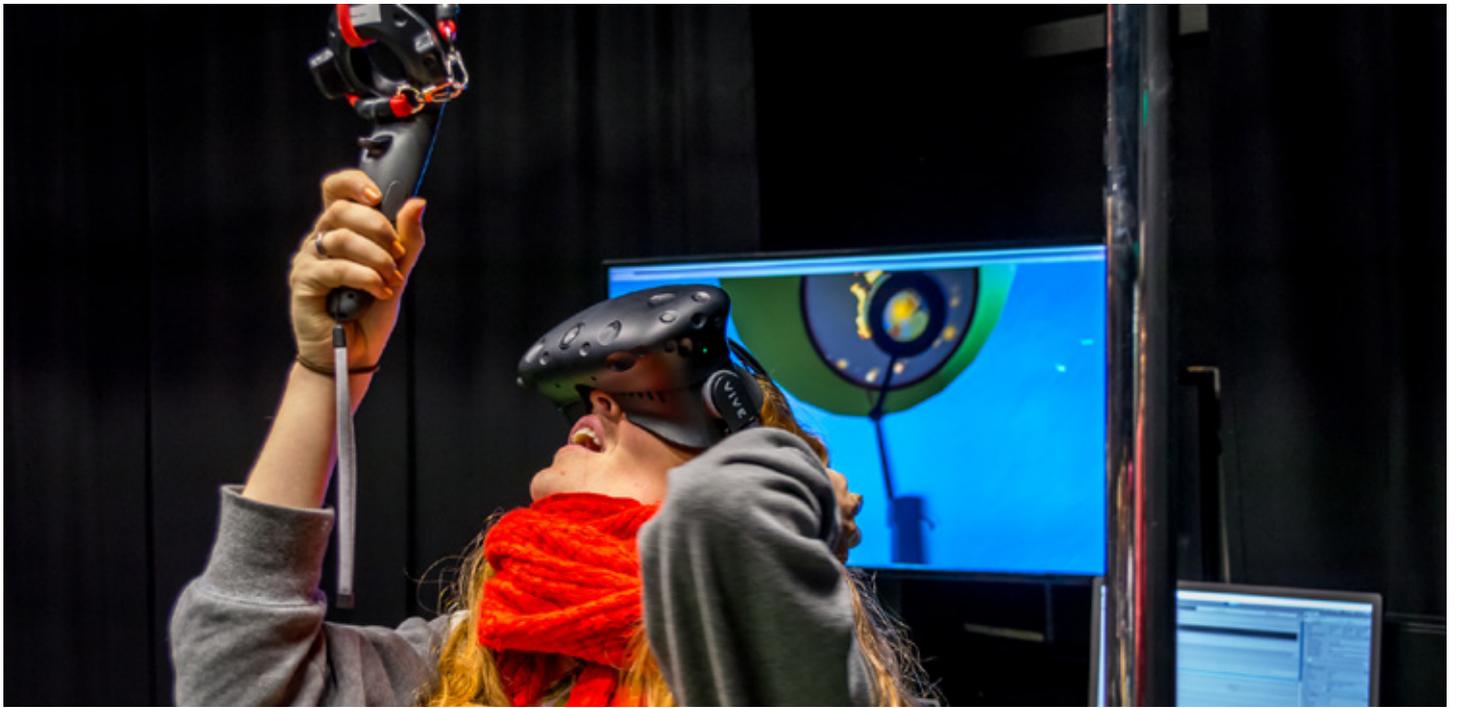
Needs to be able to recognise a gap in a market, be innovative with creative ideas and have the drive to take it through all levels of development into a business. Requires skills in effective leadership, project management and the ability to successfully collaborate with others. AUT graduates have successfully established businesses as diverse as interactive children's books and application development.

User experience (UX) designer

Designs and improves the experience of users interacting with products or services, including websites and mobile apps. Creates a seamless and enjoyable experience for the end-user by considering factors such as usability, accessibility, and overall design.

Systems innovator

Designs and implements innovative solutions to complex systemic problems in various fields such as business, government, education, and technology. Focuses on improving the way systems operate and interact, bringing positive change in organisations and communities by identifying and addressing underlying systemic issues and designing creative, sustainable solutions.



SKILLS AND KNOWLEDGE

- Ability to formulate and pitch an idea, then plan, implement and deliver
- Entrepreneurial and opportunity awareness skills
- Project management experience and skills
- Critical thinking and problem solving skills
- Ability to convey complex creative technological ideas to clients
- Creative thinker with the ability to take multiple roles in a design team
- Time management and the ability to work under pressure
- Ability to successfully collaborate with a team

PERSONAL QUALITIES

- Articulate
- Critical and imaginative
- Collaborative and team-centred
- Technologically skilled
- Resilient – able to deal with and learn from failure

SALARY GUIDE

Creative technologist salaries vary depending on job title, location, experience, and size and type of employer. On average, salaries can range from \$50,000 to \$150,000 or more per year.

	Salary (per year)
Junior creative technologist	\$60,000-\$85,000
Senior creative technologist	\$100,000-\$150,000+

Game/VR developer	\$53,000-\$65,000 (with 1-3 years' experience)
Digital content developer	\$60,000-\$80,000 (with 1-3 years' experience)
UX/UI designer	\$57,000-\$90,000 (with 1-3 years' experience)
Digital strategist	\$62,000-\$197,000 (depending on experience)

Sources: 2023 Hays Salary Guide, Glassdoor, ziprecruiter, payscale.com, Seek. Salary range is indicative of the New Zealand job market at the time of publication (2023) and should only be used as a guideline.

THE AUT ADVANTAGE

Creative technologies students work in multimedia environments across boundaries of art, science, design, engineering and computing. The focus is on student collaboration, project pitches and critiques, rather than standard lectures or exams.

FURTHER STUDY OPTIONS

The Master of Creative Technologies develops your research skills and practical understanding of interdisciplinary research in the creative industries. Research focuses on future-oriented themes or common conceptual frameworks for researchers from a variety of backgrounds.

Other postgraduate study includes masters' programmes in the areas of digital design, business and marketing as well as the Master of Philosophy and Doctor of Philosophy. Research areas include assisted machine learning, digital animation, moving image production, interactive entertainment, gaming technologies, technological art-making, smart systems and robotics.

A portrait of Sheldon Hall, a young man with dark, curly hair and a mustache, smiling. He is wearing a colorful, vertically striped polo shirt. The background is a bright, outdoor setting with green trees and a modern building in the distance.

SHELDON HALL

Ngāpuhi – Ngāti Torehina, Te Arawa – Ngāti Rangiwewehi

Asau, Lalomanu

Design Analyst at Accenture Song

Bachelor of Creative Technologies

“As a design analyst at Accenture, I help enhance clients’ products and services. We create new apps, optimise websites or redesign a business’ internal operations structure. I love the mix of creativity and technical thinking required. I also enjoy building new networks and connections with colleagues and clients around the world.

Being a design analyst means creatively coming up with new ways to tackle existing and complex problems so it’s important for me to truly understand the problem I’m trying to solve. I make sure I’m well equipped with a lot of relevant research before starting any project. I also organise client workshops to discuss and understand key problematic areas for different users. It’s important in my role to be able to really listen to a user about their experiences.

I was initially placed at Accenture through a summer internship with TupuToa that then led to a graduate role as a design analyst.

Creative technologies study taught me a broad set of both technical and soft skills that are very relevant in today’s industry. Some of those skills involved creating VR applications, learning to write code and use design tools, as well project management, collaboration and presentation skills.

I feel lucky to have great mentors and supporters who encourage me to follow up opportunities that align with my values. For example, I speak at events organised to encourage more young Māori and Pasifika into the tech industry. Currently there are less than 5% Māori and less than 3% Pasifika representation in Aotearoa New Zealand so I find it important to continue to facilitate and advocate opportunities that support my culture, my heritage and my people.”

EMPLOYER COMMENT

“To hit the ground running, a design graduate at Accenture needs to have some experience with human-centered design and basic UX/UI skills to be able to take ideas from paper to screens using common design tools like Figma or Sketch. They need also need to be able to collaborate in diverse teams.

New graduates should be enthusiastic, driven, and most importantly, kind. They must know their design tools (typography, layout, colors) and be open to learning on-the-fly.

Sheldon is always ready to engage, pick up new design tools, research with customers and turn ideas into reality. He shows how – no matter your seniority in an organisation – you can always find spaces to be a leader.”

Neysan Zölzer

Accenture Design Director

USEFUL WEBSITES

AUT's School of Future Environments

<https://futureenvironments.aut.ac.nz/>

Examples of student work

<https://futureenvironments.aut.ac.nz/featured>

The Big Idea

<https://thebigidea.nz/>

IT Professionals NZ (ITP)

www.iitp.org.nz

FURTHER INFORMATION

For the most up-to-date information on studying creative technologies, visit aut.ac.nz/creative-tech

For other Future Career Sheets visit aut.ac.nz/careersheets

EMPLOYABILITY & CAREERS

For employability and career support, AUT students can book an appointment through <https://elab.aut.ac.nz/>

FUTURE STUDENTS

Contact the Future Student Advisory team for more information:

aut.ac.nz/enquire

futurestudents@aut.ac.nz

 @AUTFutureStudents

CURRENT AUT STUDENTS

Contact the Student Hub Advisors team for more information:

0800 AUT UNI (0800 288 864)

aut.ac.nz/enquire

studenthub@aut.ac.nz

 @AUTEmployabilityandCareers

CITY CAMPUS

55 Wellesley Street East, Auckland Central

CONNECT WITH US



The information contained in this career sheet was correct at time of publication, early 2023.

