

Careers in Information and Communication Technology

ICT Jobs, Skills, and Future Pathways

อาชีพ ICT ทักษะ และเส้นทางอนาคต



How can we prepare for careers in the digital age?



ICT Careers



Job Roles



Skills



Study Pathways

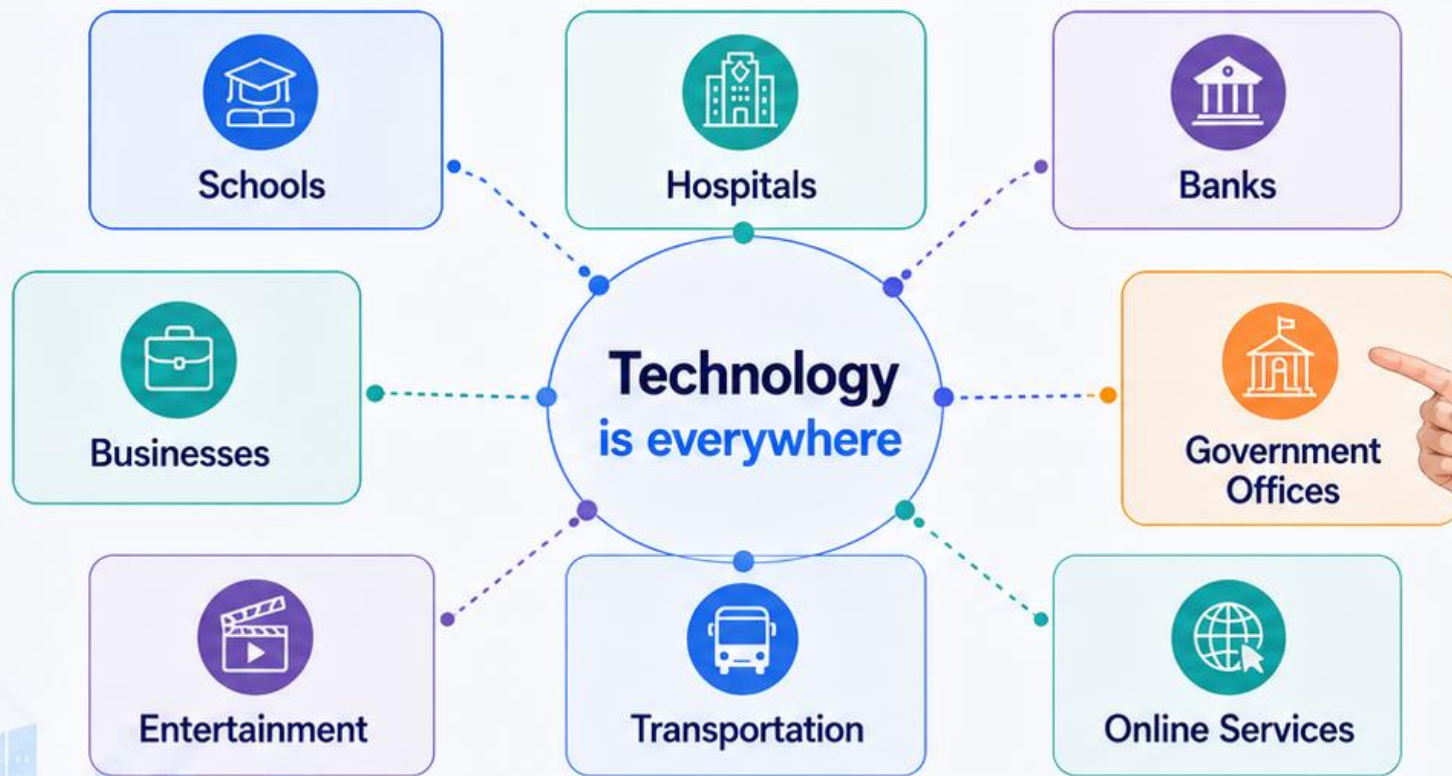


Career Research



Why ICT Careers Matter

Technology changes how people work



Almost every career now uses technology.



ICT career = อาชีพด้านเทคโนโลยีสารสนเทศและการสื่อสาร



Careers Change with Technology

Adaptation is the key



Old way of working



- create new jobs
- change old jobs
- reduce some types of work
- replace repetitive tasks
- increase the need for digital skills

Change



Digital way of working



How can we avoid being left behind?



Keep learning and adapting.



Adapt = ปรับตัว

ICT Career Map

— Different jobs, different responsibilities —



Responsibilities = หน้าที่

Build Technology

Programmers and software developers



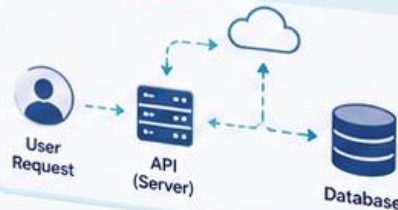
People in this area create software, apps, games, websites, and digital tools.



Mobile App



System / Backend



Write code

Turn ideas into working programs.



Design features

Plan and design useful functions.



Solve user problems

Understand needs and build solutions.



Improve software

Test, fix, and make software better.



Front-End Developer

Build the user interface and experience.



Back-End Developer

Build the server, database, and application logic.



Full-Stack Developer

Work on both front-end and back-end.



Game Developer

Create gameplay, systems, and interactive worlds.



Software Developer

Build software solutions for real-world needs.



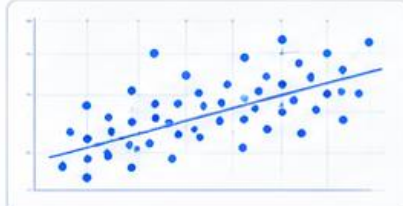
Programmer = นักเขียนโปรแกรม

Analyze Information and Systems

Data scientists and system analysts



Data Scientist



ID	Age	City	Sales	Score
1001	24	BKK	1,250	85
1002	31	CM	1,840	90
1003	28	PKT	1,320	78
1004	35	KKC	2,160	92
...	...	...	...	...

Patterns & Insights



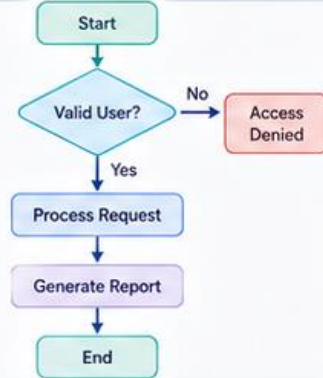
Finds patterns and meaning from large amounts of data.



System Analyst



- User Needs
- ✓ Easy to use
 - ✓ Fast process
 - ✓ Secure data
 - ✓ Accurate reports



Requirement Document

- Functional Requirements
- Non-functional Requirements
- Data Requirements
- Business Rules

Studies user needs and designs better information systems.

Both careers need:



problem-solving



logical thinking



communication



data understanding



system thinking



Analyze = วิเคราะห์

Protect Networks and Data

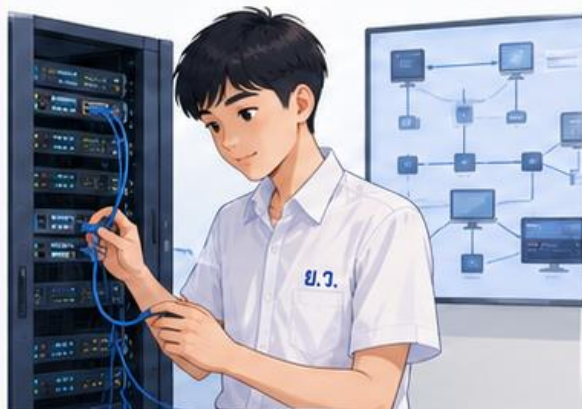
Cybersecurity and network professionals

Security = ความปลอดภัย



Computer Network Professionals

Build, improve, maintain, and solve network problems.



Networks



Connectivity



Performance



ICT Security Specialists

Check, protect, and improve system security.



Security



Monitoring



Risk Management

Main Tasks



Protect data
ปกป้องข้อมูล



Monitor networks
เฝ้าระวังเครือข่าย



Prevent attacks
ป้องกันการโจมตี



Solve security problems
แก้ไขปัญหาความปลอดภัย



Improve system performance
เพิ่มประสิทธิภาพระบบ

Test and Improve Software

Testers and test analysts

Error = ข้อผิดพลาด

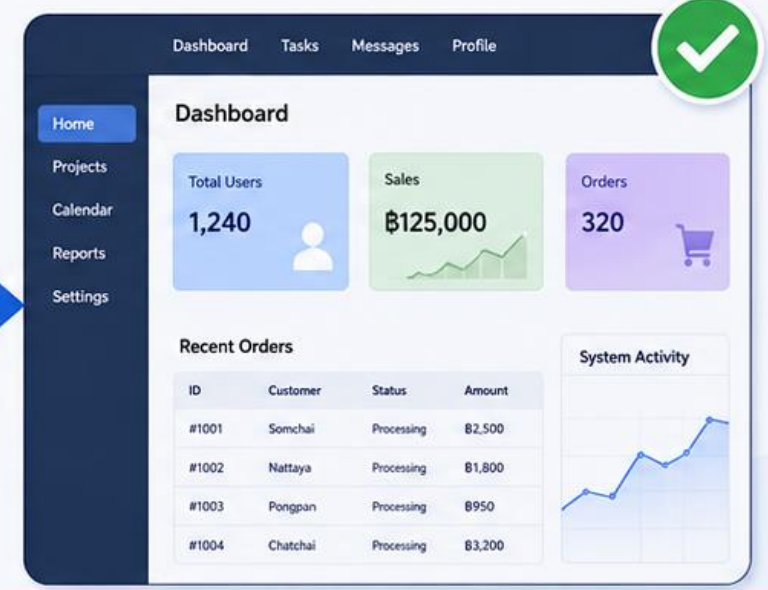
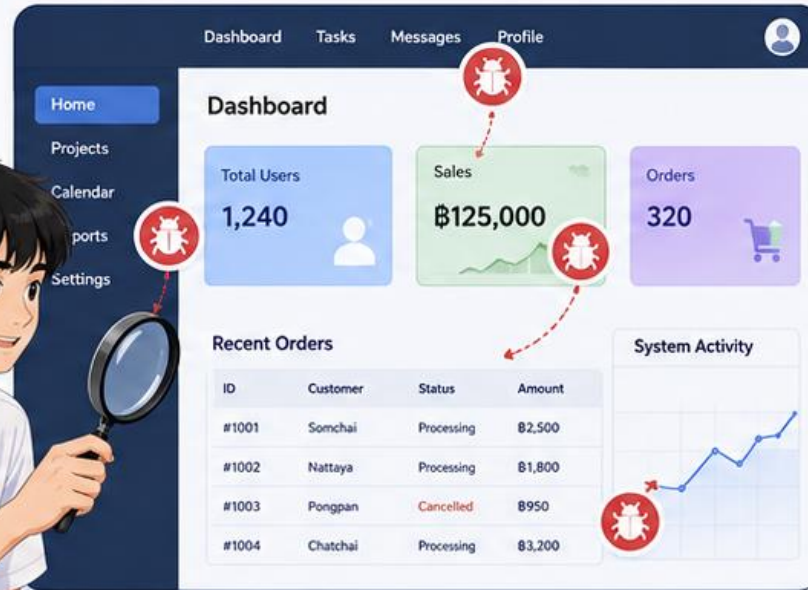
Testing careers help find problems before users experience them.

Examples

-  Test Programmer
-  Software Tester
-  Test Analyst

Main Tasks

- ✓ Check program errors
- ✓ Test features
- ✓ Report problems
- ✓ Support system improvement
- ✓ Make software more reliable



✓ Better quality • More reliable • Better user experience



Find

Find errors and problems



Report

Report problems clearly



Improve

Improve software and fix issues



Maintain Systems

System administrators and database administrators



System Administrator

Manages computer systems, hardware, software, networks, and configuration.



Hardware



Software



Network



Configuration



System Health

All Systems Normal



Uptime

99.9%



Database Administrator

Develops, maintains, backs up, recovers, and improves database systems.



Database



Backup



Recovery



Performance



Problem Fixing



Keep systems stable, safe, and available.



Database = ฐานข้อมูล



Support and Train Users

IT support technicians and IT trainers



IT Support Technician

Helps users solve hardware and software problems.



Support



Hardware



Software



Troubleshooting



IT Trainer

Teaches people how to use technology effectively.



Presentation



Training Plan



Learners



patience



communication



technical knowledge



problem-solving



clear explanation



Support = สนับสนุน / ช่วยเหลือ

Manage Technology Strategy

ICT managers and CIOs



ICT Manager

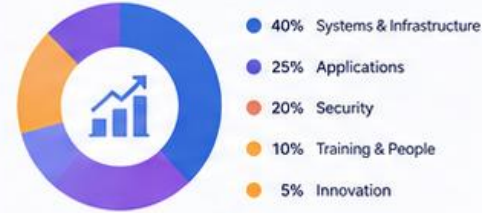
Helps manage technology projects, systems, and teams in an organization.

DIGITAL STRATEGY BOARD

STRATEGY ROADMAP



BUDGET OVERVIEW



STANDARDS & POLICIES



OUR IT TEAM



ORGANIZATION GOAL



Chief Information Officer (CIO)

Leads the overall technology direction and helps the organization use ICT successfully.

KEY LEADERSHIP TASKS



Plan ICT policies



Manage projects



Set standards



Manage budgets



Develop IT teams



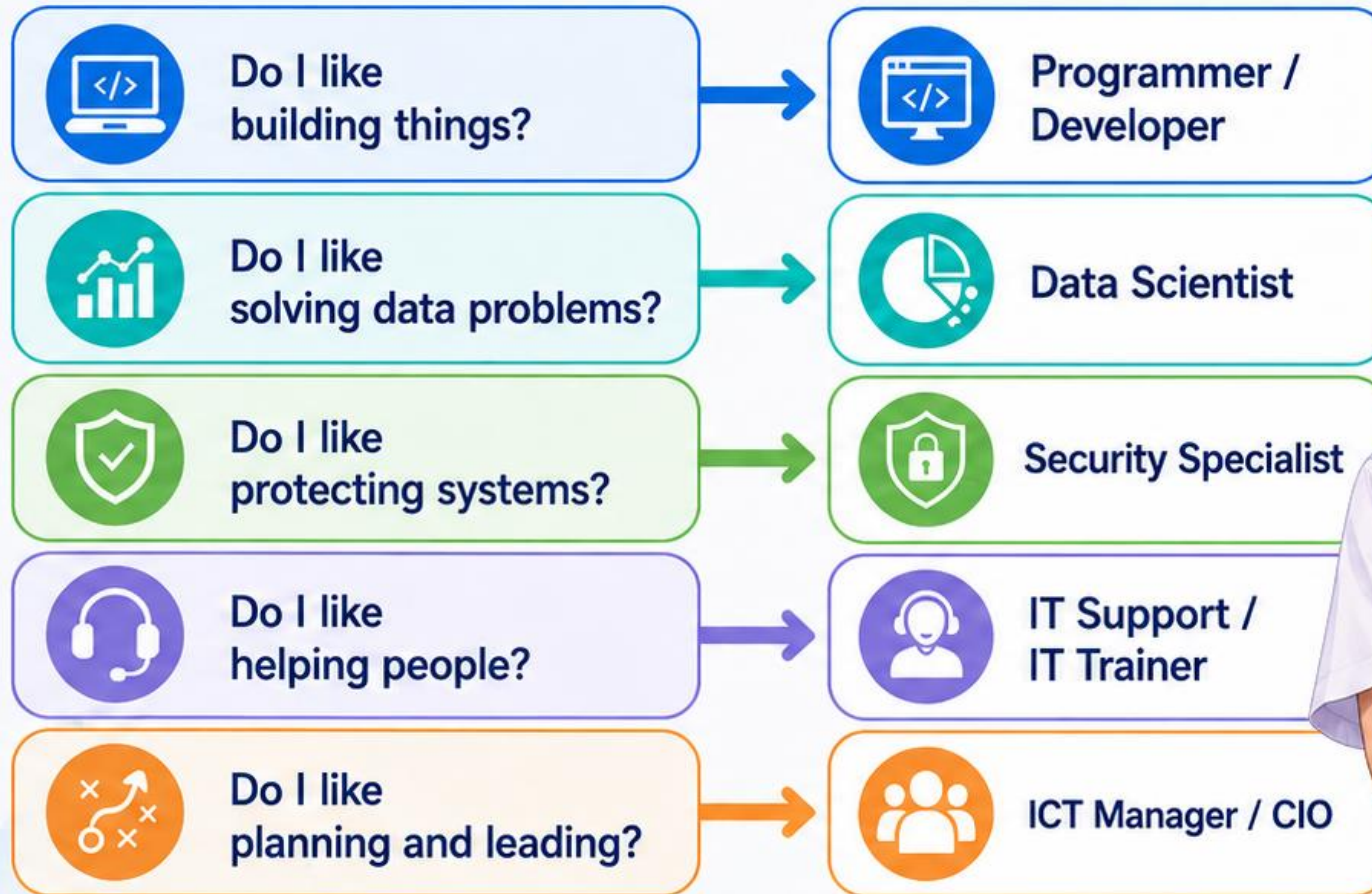
Advise leaders

Manager = ผู้จัดการ



Which ICT Career Fits You?

Match your interests with job roles



★ Interest = ความสนใจ



Skills Needed for ICT Careers

Technical skills + human skills

Technical Skills

-  coding
-  data analysis
-  networking
-  cybersecurity
-  database management
-  system design



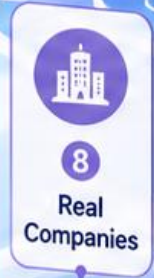
Human Skills

-  communication
-  teamwork
-  problem-solving
-  creativity
-  responsibility
-  lifelong learning

Skills = ทักษะ

How Can Students Prepare?

Start building your pathway now



Small steps now can help your future.

Class Activity: Career Match

What does each ICT worker do?



Programmer



Data Scientist



ICT Security Specialist



System Administrator



IT Support Technician



Database Administrator



ICT Manager

plans ICT policies

manages databases

helps users solve problems

builds software

protects systems

studies large data

manages computer systems



5 minutes

Homework: ICT Career Research

Research one career in Thailand

Research = ค้นคว้า



In your group, choose one ICT career.

- 1 Job title
- 2 Main responsibilities
- 3 Average salary in Thailand
- 4 Companies that hire this role
- 5 Required skills
- 6 University faculties or majors
- 7 Experience or certificates needed
- 8 Why this career is interesting



Average Salary
in Thailand



Companies that
Hire



Required
Skills



University
Faculties
or Majors



Experience or
Certificates
Needed



Why this Career
is Interesting



Rule: Each group must choose **a different career.**

Exit Ticket

Before you leave



Answer in your notebook:

- 1 Name one ICT career from today.
- 2 What does this person do?
- 3 What skill is important for this career?
- 4 Which ICT career are you most interested in? Why?



Submit before leaving.



The End

Your future career starts with what you learn today

Remember:

ICT careers need people who can:

- learn new technology
- solve problems
- work with others
- communicate clearly
- adapt to change
- keep improving



Learning



Technology



Problem-Solving



Teamwork



Communication



Adaptability

★ Explore careers. Build your skills. Prepare your future. ★



AI Engineer



Cloud Engineer



Data Scientist



Cybersecurity Specialist



Software Developer



IT Project Manager

