# Computer Engineering Sub-Categories

At the career level, computer engineering offers two central paths – hardware and software engineering – and multiple sub-specialty or areas of concentration, such as the following:[\n]

Artificial Intelligence: Designing computer systems that simulate human thinking, learning, and reasoning abilities.[\n]

Computer Architecture: Designing and developing new, more powerful computing systems.[\n]

Computer Design: Research, design, and development of electronic computer components, such as microchips, microprocessors, circuit boards, etc.[\n]

Operating Systems and Networks: Designing and developing software and network systems.[\n]

Robotics: Designing and developing robotic systems used in a variety of industries (e.g. industrial production).[\n]

Software Applications: Designing and developing computer software to research and solve problems outside of the computer engineering field (e.g. medicine).[\n]