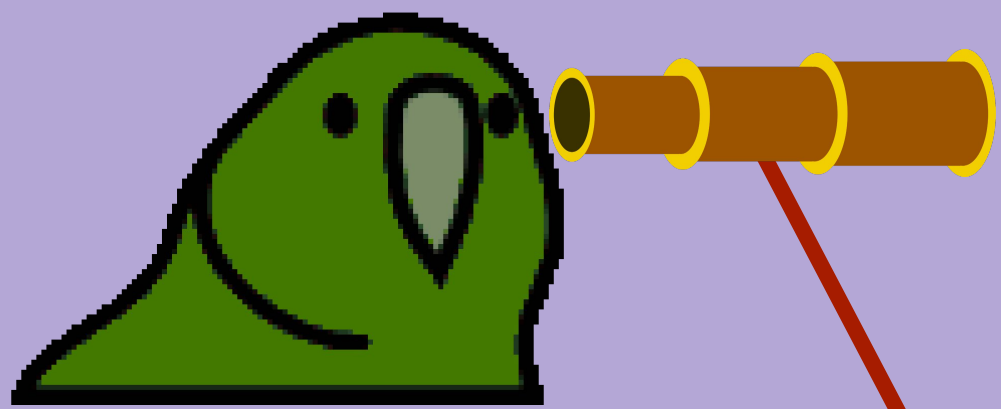# IT Thinking Hats

You will often need to think about IT problems from a variety of perspectives. Each perspective is like "hat" that you can wear to help you focus on a particular aspect of a problem. Different "hats" are helpful at different stages of development. Let's look at a few of the different "hats" that can help you achieve your goals with IT.
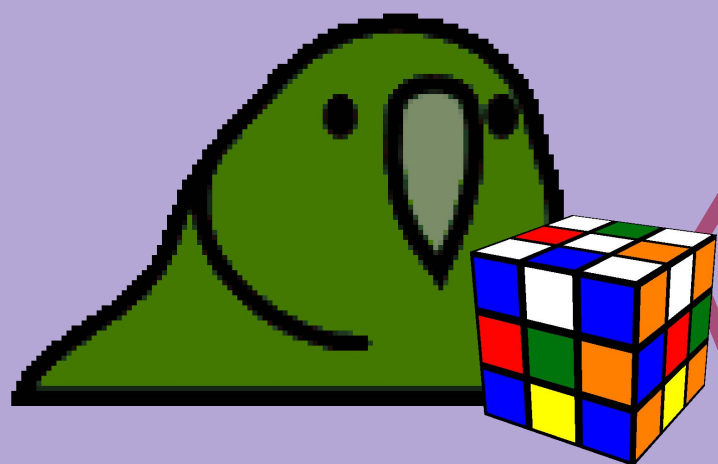
Outcome-Focussed

Will the planned solution meet users' needs? Could we solve this problem with a simpler solution?
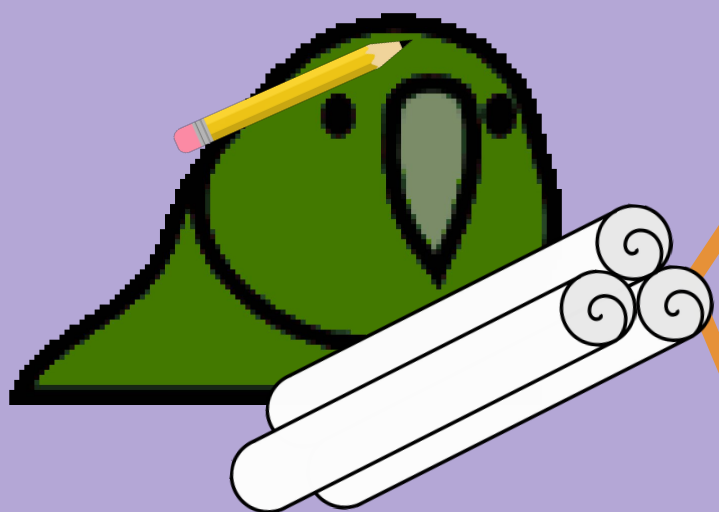
Architect

What software and hardware will be needed to build this system? How should the pieces of software involved interact with each other?

Puzzle Solver

What abstraction can I use so that I do not need to repeat this section of code? What algorithm would solve this problem efficiently?
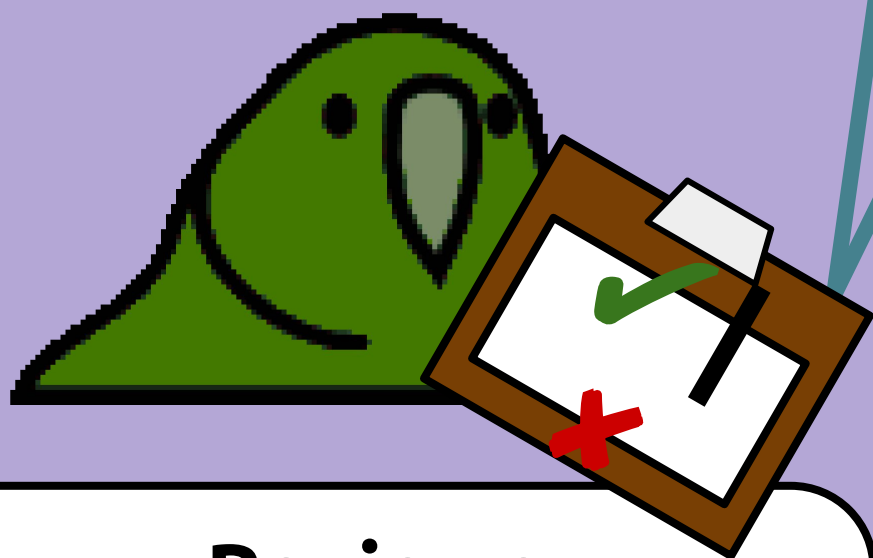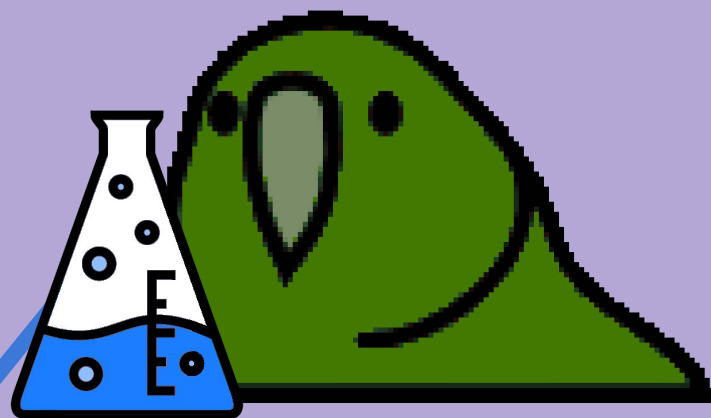
Reviewer

What inputs would cause this software to produce incorrect outputs? Are there any potential security vulnerabilities?

Problem & Requirements

Design & Source Code

Testing & Debugging

Scientist

Which of these alternative algorithms is the fastest? What changes could I make to my machine learning system to make it more accurate?

Communicator

How can I explain my planned solution to users? How can I make this source code readable and documented so that other developers can maintain it?

Detective

Why does my software act differently to how I think it should be acting? What is the cause of this bug?