

PATTERN 09  
**Bit Twiddling**

## 9. Bit Twiddling

Bit Twiddling is like working on jigsaw puzzle to the point where everything looks the same and you're not making progress anymore. You might pick up the same piece, try it in a few places, rotate it, put down, only to pick it up a few minutes later.

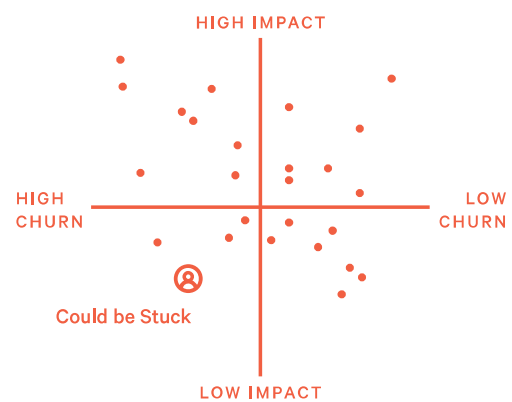
Bit Twiddling reveals itself when an engineer is unwaveringly focused on a single area of the codebase for a very long time, making only slight changes here and there. This often happens because the engineer doesn't fully understand the problem or the context for making the change.

They may be losing steam and motivation, or are at high risk for doing so.

### How to recognize it

Look for high rates of churn in the same area of the code. The key is to couple repetition and refactoring with ambivalence or indifference in code review over an extended period.

For example, watch for a standard library call, or otherwise stable code, get refactored into customized code for some difficult to articulate optimization. Or, watch for code that gets refined and refactored multiple times with disinterest — light code review and PRs with generic submitter comments like “refactoring,” “reorganizing,” or “touch up,” followed by “LGTM”.



### What to do

Look for ways to reenergize the engineer with a new project. Find a ticket, even a small one, that will lead into new and interesting areas of the code — even if it comes at the expense of the team's productivity in the short-term.

Creative workers thrive when tackling new and challenging problems, even if they at first balk at working outside their area of expertise. New experience typically leads to learning something new, a process most engineers enjoy.