# fd Fast file finder

**START HERE**

`fd <pattern>`
Find by name (regex)

`fd -H <pattern>`
Include hidden files

`fd <pattern> <dir>`
Search one folder

`fd -I <pattern>`
Include ignored files

`fd -e <ext>`
Match an extension

`fd -e <ext> -x <cmd>`
Run per result

`fd -t d <pattern>`
Directories only

`fd -g '<glob>'`
Glob instead of regex

**Walk tree** current dir → `skip hidden + ignored` → **Match name** regex, smart case → `-e -t -S filters` → **Filter** type, size, age → `-x / -X` → **Print or run** parallel

## CONCEPTS

fd searches names, not contents, and skips hidden files and anything in .gitignore by default. .gitignore is only honored inside a git repo. If a file you know exists is missing, try fd -u. Debian/ Ubuntu install the binary as fdfind.

Smart case: an all-lowercase pattern ignores case, any capital makes it case-sensitive. Force it with -s or -i.

## SEARCHING

**`fd`**
List everything below the current directory

`fd <pattern>`
Names matching a regex

`fd <pattern> <dir> [<dir>]`
Search in given directories

`fd -g '<glob>'`
Match with a glob pattern
*Quote the glob so your shell does not expand it first.*

`fd -p '<regex>'`
Match against the full path

`fd -s <pattern>`
Force case-sensitive

`fd -i <pattern>`
Force case-insensitive

`fd -F <string>`
Treat pattern as a literal string

`fd --and <pattern> <pattern>`
Name must match both patterns

`fd --exact <name>`
Match the whole filename only

## FILTERS

`fd -e <ext>`
Only this extension

`fd -e <ext> <pattern>`
Extension plus name pattern

`fd -t f`
Regular files only

`fd -t d`
Directories only

`fd -t l`
Symlinks only

`fd -t x`
Executable files only

`fd -t e`
Empty files or directories

`fd -d <n> <pattern>`
Limit search depth

`fd -S +<size>`
Files larger than size, e.g. +10M
*+ means at least, - at most. k, M, G are powers of 1000; ki, Mi, Gi of 1024.*

`fd --changed-within <dur>`
Modified recently, e.g. 2d or 1h

`fd --changed-before <dur>`
Modified before a date or longer ago than a duration

`fd -o <user>`
Owned by this user

`fd -E '<glob>'`
Exclude matching paths

`fd -L`
Follow symlinks

## HIDDEN AND IGNORED

`fd -H <pattern>`
Include hidden files

`fd -I <pattern>`
Do not respect ignore files

`fd -u <pattern>`
Unrestricted: same as -HI

## HIDDEN AND IGNORED (cont.)

**`~/.config/fd/ignore`**
Global ignore file (gitignore syntax)
*On Windows: %APPDATA%\fd\ignore.*

**`.fdignore`**
Per-project ignore file, fd only

**`.ignore`**
Ignore file shared with other search tools

## OUTPUT

`fd -a <pattern>`
Print absolute paths

`fd -l <pattern>`
Detailed listing, like ls -l

`fd -0 <pattern>`
NUL-separated output
*Pair with xargs -0 for names with spaces.*

`fd --format '<template>'`
Print each result through a template

`fd -c never <pattern>`
Turn colors off

`fd -c always <pattern>`
Force colors, e.g. into less -R

## RUNNING COMMANDS

`fd -e <ext> -x <cmd>`
Run cmd once per result, in parallel

`fd -e <ext> -X <cmd>`
Run cmd once with all results

`fd -x <cmd> {}`
Placeholder: full path

`fd -x <cmd> {/}`
Placeholder: file name

`fd -x <cmd> {.}`
Placeholder: path without extension

## RUNNING COMMANDS (cont.)

`fd -x <cmd> {//}`
Placeholder: parent directory

`fd -x <cmd> {/.}`
Placeholder: name without extension

`fd -j <n> -x <cmd>`
Set number of parallel jobs
*Long form --threads. -j 1 runs one command at a time.*

Without a placeholder, {} is appended automatically. Quote the whole command if it holds pipes or redirects, e.g. -x sh -c '...'.

## FD VS FIND

### Equivalents

| find ... | fd ... |
|---|---|
| `-iname '*foo*'` | `fd foo` |
| `-name '*.md'` | `fd -e md` |
| `-type f` | `fd -t f` |
| `-mtime -2` | `--changed-within 2d` |
| `-exec c {} \;` | `fd -x c` |
| `-exec c {} +` | `fd -X c` |

fd is faster and has saner defaults, but find still wins for complex boolean tests like -perm, -newer and -prune. fd -u is the fair comparison to find.

## RECIPES

### Convert all PNGs to WebP

```
fd -e png -x magick {} {.}.webp
```

### Grep only some file types

```
fd -e cpp -e h -X rg 'std::cout'
```

### Delete stray files, with a prompt

```
fd -H '^\.DS_Store$' -t f -X rm -i
```

### Big files changed this week

```
fd -t f -S +50M --changed-within 7d -l
```