

SKU Skills Universe Architecture

A personal reference for the WAT framework and Skills system — how it's structured, how skills are built, and how everything fits together across projects.

FRAMEWORK	STACK	LAST UPDATED
WAT v1	Claude Code + Python	Feb 2026

01 — THE WAT FRAMEWORK

WAT separates **reasoning** from **execution**. AI handles orchestration; deterministic scripts handle the actual work. This is what keeps accuracy high across multi-step tasks.

W

Workflows

Markdown SOPs in `workflows/`. Define objective, inputs, tools, outputs, and edge cases — written in plain language.

`workflows/01-capture-app-ui.md`

A

Agent

Claude Code — the decision-maker. Reads workflows, picks the right tools, handles failures, asks questions, improves the system.

`claude-code` (this session)

T

Tools

Python scripts in `tools/` or `scripts/`. One job each. Consistent, testable, reusable across projects.

`tools/pageflows_capture.py`

Why it works: If each step is 90% accurate, five chained steps = 59% success. By offloading execution to deterministic scripts, the agent stays focused on reasoning — where it excels.

02 — SKILLS: PORTABLE WAT PACKAGES

Skills are **portable WAT bundles**. Instead of rebuilding tools and workflows per project, skills live in `~/.claude/skills/` and load into any session instantly.

```

# System-wide skills (available in all projects) ~/.claude/skills/ ┌─ ui-clone/ ← WAT
for cloning any app UI ┌─ claude-ui/ ← Claude.ai 19 flows + all components ┌─ agent-
browser/ ← Browser automation + PageFlows tips ┌─ ultimateuiux/ ← 93 styles, 121
palettes, design system ┌─ nextjs/ ← Next.js 16 App Router patterns ┌─ skill-creator/
← How to build new skills ┌─ ... 15+ more skills # Per-project context project/ ┌─
CLAUDE.md ← Project instructions + WAT setup ┌─ workflows/ ← Project-specific SOPs ┌─
tools/ ← Project-specific scripts ┌─ .env ← API keys (never in skills)

```

The key difference: project tools/ are local. Skills are **shared across all projects** and version-controlled on GitHub.

03 — SKILL ANATOMY

Every skill follows the same structure. SKILL.md is the entry point — everything else is supplementary.

SKILL.md

Main index — loaded on invoke. Must stay under 150 lines.

- Frontmatter: name + description (<200 chars)
- Quick-start commands
- Critical rules (most common bugs)
- Links to references/ (NOT duplicates)

references/*.md

Deep-dive docs. Loaded on demand. Max 150 lines each.

- Component details, state diagrams
- Page layouts (ASCII diagrams)
- Design tokens table
- Known bugs + fixes

scripts/*.py

Deterministic tools — the T in WAT. One job each.

- Never hardcode credentials
- Read from .env or args
- Must be testable standalone
- requirements.txt alongside

assets/ (optional)

Templates, examples, screenshots referenced by refs.

- No large binary files
- Screenshots: path refs only
- Templates: fill-in placeholders

04 — CURRENT SKILLS CATALOG

● ui-clone

WAT framework for cloning any app from PageFlows. 3-phase: capture → build → package skill.

● claude-ui

Claude.ai full UI clone. 19 flows, all design tokens, every component. Next.js 16 + Tailwind v4.

● agent-browser

Browser automation CLI. Core workflow: open → snapshot → interact → re-snapshot. PageFlows tips

● nextjs

Next.js 16 App Router: use cache, RSC, streaming, PPR, Prisma 7, Better Auth.

included.

● **ultimateuiux**

93 styles, 121 palettes, 81 font pairings, 65 WCAG criteria + Claude.ai blueprint.

● **skill-creator**

How to build new skills. Templates, validation, packaging workflow.

● **auth / api / security**

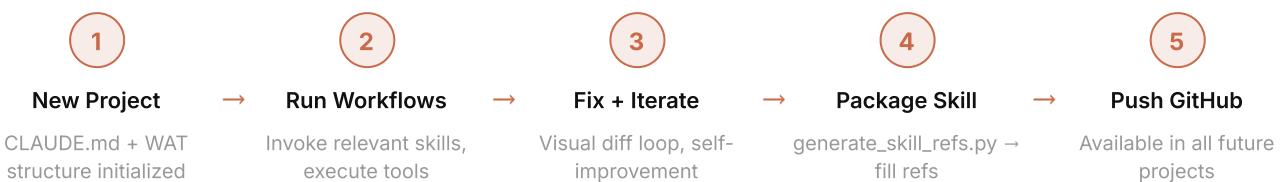
Quality systems: score → fix → loop until target. OWASP-mapped, Better Auth patterns.

● **stripe / payment / email**

Stripe integration, Resend + React Email, billing flows. 7 modes each.

05 — PROJECT → SKILL LIFECYCLE

Every successful project workflow should be packaged as a skill. This is the self-improvement loop made permanent.



```
# Phase 1: Bootstrap
python scripts/pageflows_capture.py --app notion
python scripts/find_shared_components.py --manifest .tmp/notion/manifest.json

# Phase 2: Build with visual validation
python scripts/visual_diff.py --original screenshots/notion/home/01.png --url http://localhost:3000
# Target: ≥80% match on every screen

# Phase 3: Package as skill
python scripts/generate_skill_refs.py --app notion --component-map .tmp/notion/component-map.json
cd ~/.claude/skills && git add notion-ui/ && git push
```

06 — QUALITY RULES

RULE	LIMIT	WHY
SKILL.md size	< 150 lines	Fits in context window without truncation
Reference file size	< 150 lines	Each file loaded on demand — keep focused
Description frontmatter	< 200 chars	Used for skill matching and discovery

No duplicate info	DRY	Info in SKILL.md OR references, never both
Visual diff threshold	$\geq 80\%$	Use --threshold 70 for font-heavy screens
Critical rules minimum	$\geq 5 \text{ entries}$	From actual implementation failures — most valuable part
Scripts: no hardcoded secrets	.env only	Skills are public on GitHub

07 — SELF-IMPROVEMENT LOOP

Every bug found in a future session is an opportunity to make the skill permanently better.

