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# Magic Folder: A Filesystem-Level Abstraction for Human-Executable AI Applications

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## Abstract

AI coding agents can now generate entire web applications—frontend, backend, databases—in minutes. But the output is a raw project directory: dozens of files, configuration scripts, dependency manifests, and build toolchains that 99% of users cannot run. The gap between “AI-generated code” and “something a human can actually use” is enormous.

We propose the **Magic Folder Protocol (MFP)**: *a filesystem-level convention that transforms AI-generated project directories into typed, human-facing artifacts through marker files and runtime-specific handlers*. An MFP-compliant directory—a Magic Folder—is an ordinary folder whose internal structure conforms to a declared manifest, enabling the host system to present it as a typed object—an application, a skill, a workflow—with a custom icon, a controlled UI, and platform-appropriate activation.

MFP introduces three key innovations over traditional bundle mechanisms (macOS `.app`): (1) *polymorphic types*—the same protocol supports apps, skills, workflows, and extensible custom types; (2) *runtime-agnostic handlers*—the same Magic Folder is handled differently on web (Buda), desktop (macOS), and mobile (Android); (3) *AI re-entrancy*—agents can re-enter and modify Magic Folders, enabling continuous human-AI collaboration.

In the companion paper, File-Augmented Retrieval (FAR) solved machine readability—making every file understandable to AI agents. MFP solves the symmetric problem: *human usability*—making every AI output understandable to humans.

*FAR makes files readable to machines. MFP makes AI outputs usable by humans.*

## 1 The Problem: AI Can Generate Code, But Humans Need Applications

Modern coding agents—Claude Code, OpenAI Codex, Cursor, GitHub Copilot—have reached a remarkable capability threshold. Given a natural language prompt, they can generate complete web applications: React frontends, Express backends, Prisma database schemas, Docker configurations, CI/CD pipelines. The code is often production-quality.

But there is a devastating gap between “generated code” and “usable application.”

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Preprint. Work in progress.

## 1.1 The 99% Problem

Consider what happens after an AI agent generates a full-stack web application:

1. The user receives a directory with 50–200 files
2. They must install Node.js, pnpm, and system dependencies
3. They must run `pnpm install` and resolve version conflicts
4. They must configure environment variables (`.env`)
5. They must start a database (PostgreSQL, Redis)
6. They must run `pnpm dev` and know which port to open
7. They must understand error messages when something fails

For a software engineer, this is routine. For a product manager, a designer, a business analyst, a student—the 99%—this is an insurmountable wall. The AI generated the code perfectly. The human simply cannot use it.

## 1.2 The Raw Directory Problem

The fundamental issue is that AI agents output *raw engineering directories*. These directories are optimized for machines and developers:

```
my-app/
package.json      # What is this?
tsconfig.json     # What is this?
next.config.ts    # What is this?
prisma/schema.prisma # What is this?
src/app/page.tsx  # Where do I start?
src/server/...    # 30 more files
node_modules/     # 500MB of dependencies
```

A non-technical user sees this and feels overwhelmed. There is no entry point, no explanation, no “double-click to run.” The directory is *machine-native*, not *human-native*.

## 1.3 The Missing Layer

We identify a missing abstraction layer in the AI coding stack:

Layer	Solved By	Audience
Machine readability	FAR (.meta sidecars)	AI agents
Code generation	Coding agents	Developers
<b>Human usability</b>	<b>??? (this paper)</b>	<b>Everyone</b>

The missing layer is a *human interface* over AI-generated directories. This is what Magic Folder provides.

## 2 Precedent: The macOS Application Bundle

The problem of “directory as executable” was solved forty years ago.

### 2.1 NeXTSTEP’s Insight

In 1988, NeXTSTEP introduced the *Application Bundle*: a directory with a known internal structure that the operating system treats as a single executable object. When Steve Jobs brought this to Mac OS X, it became the foundation of the macOS application model.

A macOS `.app` is not a file. It is a directory:

```
MyApp.app/
  Contents/
    Info.plist          # Manifest (metadata)
```

MacOS/MyApp	# Executable entry point
Resources/	# Icons, assets, localization
Frameworks/	# Bundled dependencies

The Finder renders this directory as a single icon. Double-clicking it reads `Info.plist`, locates the executable via `CFBundleExecutable`, and launches it. The user never sees the internal structure.

## 2.2 The Bundle Contract

The elegance of the bundle model lies in its simplicity. It is a *contract*:

1. **Extension declares type:** `.app` signals “application”
2. **Manifest declares behavior:** `Info.plist` defines how to run it
3. **Structure is hidden:** Finder presents it as a single object
4. **Self-contained:** all dependencies are inside the bundle

## 2.3 From Native Bundles to Magic Folders

We observe that AI-generated projects face the *exact same problem* that native applications faced before bundles. The solution is the same principle—directory conventions—but adapted for the AI era:

Aspect	macOS .app Bundle	Magic Folder (MFP)
Content	Compiled binary + resources	Source or compiled + configs
Manifest	<code>Info.plist</code>	Marker file ( <code>APP.json</code> , <code>SKILL.md</code> )
Type system	Single type (application)	Polymorphic (app, skill, workflow, ...)
Runtime	macOS only	Runtime-agnostic (web, desktop, mobile)
AI re-entrant	No (compiled, opaque)	Yes (agent can re-enter and modify)
Handler	Fixed (LaunchServices)	Declared per runtime

The key innovations of MFP over the original bundle model are:

1. **Polymorphic types:** not just “application” but a family of artifact types, each with its own marker and presentation.
2. **Runtime-agnostic handlers:** the same Magic Folder can be handled differently on Buda (web), macOS (desktop), or Android (mobile). The protocol defines identity; each runtime defines behavior.
3. **AI re-entrancy:** a Magic Folder can contain source code *or* compiled artifacts. When source is present, AI agents can re-enter the folder to iterate. This creates a continuous human-AI collaboration loop that compiled bundles cannot support.

Note that MFP does not *require* source code. An MFP-App Bundle containing only `server.js` (compiled/bundled output) is perfectly valid—the execution script simply changes. The re-entrancy is a capability enabled by the protocol, not a constraint imposed by it.

## 3 The Magic Folder Protocol (MFP)

### 3.1 Definition

The **Magic Folder Protocol (MFP)** defines a convention by which an ordinary filesystem directory becomes a typed, human-facing artifact. A directory conforming to MFP is called a **Magic Folder**.

Formally:

A directory  $D$  is a Magic Folder of type  $T$  if and only if  $D$  contains the *marker file*  $M_T$  required by type  $T$ ’s specification.

For example:

- A directory containing `SKILL.md` is an **MFP-Skill Bundle**
- A directory containing `APP.json` is an **MFP-App Bundle**
- A directory containing `WORKFLOW.yaml` is an **MFP-Workflow Bundle**

### 3.2 Core Principles

1. **Convention over configuration.** Type is determined by the presence of a marker file, not by registration in a database.
2. **Directory is the unit.** The folder boundary is the packaging boundary.
3. **Manifest declares identity.** The marker file defines *what* the folder is.
4. **Runtime declares behavior.** The *host runtime* decides *how* to handle each type (Section 6).
5. **Polymorphic presentation.** The same directory can be rendered differently depending on its type and the host runtime.
6. **AI re-entrant.** Unlike compiled bundles, a Magic Folder can be re-entered by AI agents for continued iteration.

### 3.3 The Three-Layer Architecture

MFP sits between AI output and human interaction:

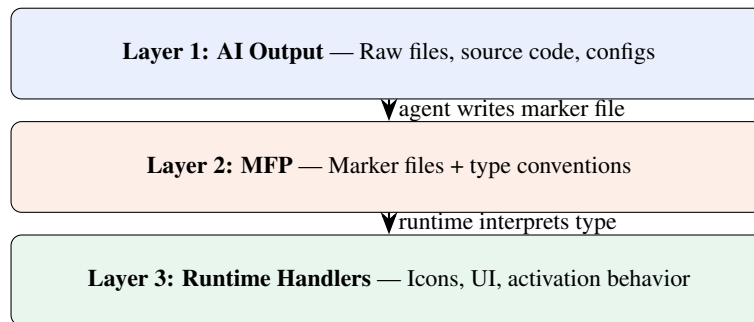


Figure 1: The MFP three-layer architecture. AI agents produce Layer 1. MFP defines Layer 2. Each host runtime implements Layer 3.

### 3.4 AI Re-Entrancy

A critical difference from traditional bundles (macOS `.app`, Android APK) is that Magic Folders are *AI re-entrant*. An AI agent can:

1. Generate a project with a marker file (creating a Magic Folder)
2. The user interacts with it via the runtime handler
3. The user asks the agent to modify it
4. The agent re-enters the same directory, modifies files, updates the marker
5. The runtime handler reflects the changes immediately

This creates a continuous loop: **AI generates** → **human uses** → **human requests changes** → **AI modifies** → **human uses again**. Traditional compiled bundles break this loop because the source is not present.

Note that MFP does not require source code—a Magic Folder can contain compiled artifacts (e.g., `node server.js` with bundled output). The re-entrancy is a capability, not a requirement.

## 4 Manifest Specification

Every MFP bundle type is defined by a *marker file* that serves as its manifest. The manifest declares what the folder is; the runtime handler (Section 6) decides what to do with it.

## 4.1 Marker File Convention

The marker file name determines the MFP type:

Marker File	MFP Type	Format	Required Fields
SKILL.md	MFP-Skill Bundle	Markdown	name, description
APP.json	MFP-App Bundle	JSON	name, runtime, entry
WORKFLOW.yaml	MFP-Workflow Bundle	YAML	name, steps, trigger
DATA.json	MFP-Data Bundle	JSON	name, schema, source

## 4.2 MFP-App Bundle Manifest

```
{
  "name": "InvoiceGenerator",
  "version": "1.0.0",
  "description": "AI-generated invoice management app",
  "runtime": "nextjs",
  "entry": "src/app/page.tsx",
  "icon": "icon.png",
  "ports": { "dev": 3000 },
  "env": ["DATABASE_URL", "AUTH_SECRET"],
  "scripts": {
    "start": "pnpm dev",
    "build": "pnpm build"
  }
}
```

## 4.3 MFP-Skill Bundle Manifest

An MFP-Skill Bundle uses SKILL.md as its manifest—a Markdown file with structured sections:

```
# Meeting Assistant

## Description
AI-powered meeting summarization and action item extraction.

## Capabilities
- Real-time transcription
- Action item extraction
- Follow-up scheduling

## Trigger
When user asks to summarize a meeting.

## Instructions
1. Read the meeting transcript
2. Extract key discussion points
3. Generate structured summary
```

The host runtime parses the Markdown headings to extract structured metadata. This is intentionally low-ceremony: a product manager can author an MFP-Skill Bundle by writing a single Markdown file.

## 4.4 Automatic Marker Generation

AI agents should generate marker files as part of project creation. When a Buda agent creates a new project, it automatically writes the appropriate marker file:

- Generated a React app → writes APP.json with runtime: "nextjs"

- Generated a static HTML page → writes `APP.json` with `runtime: "static"`
- Generated a skill → writes `SKILL.md` with structured sections

This ensures that *every AI output is a Magic Folder by default*. The user never needs to create marker files manually.

## 4.5 Design Rationale

We chose marker files over directory extensions (e.g., `.skill/`) for three reasons:

1. **Git-friendly**: marker files are trackable, diffable, and mergeable.
2. **Inspectable**: users can read the manifest without special tools.
3. **Composable**: a directory can contain multiple marker files, making it simultaneously an MFP-Skill and an MFP-App.

# 5 Polymorphic Type System

## 5.1 MFP Bundle Types

MFP defines an extensible set of bundle types, each identified by its marker file:

Type	Marker File	Purpose
MFP-Skill Bundle	<code>SKILL.md</code>	Agent skill definition
MFP-App Bundle	<code>APP.json</code>	Runnable application
MFP-Workflow Bundle	<code>WORKFLOW.yaml</code>	Automation workflow
MFP-Data Bundle	<code>DATA.json</code>	Structured dataset

## 5.2 MFP-App Bundle: Runtime Subtypes

The MFP-App Bundle is the most complex type. Its `APP.json` manifest declares a `runtime` field that determines how the application is executed:

Runtime	Entry	Execution	Example
<code>static</code>	<code>index.html</code>	Serve via nginx/CDN	Single-page HTML app
<code>node</code>	<code>server.js</code>	<code>node server.js</code>	Express API server
<code>nextjs</code>	<code>package.json</code>	<code>pnpm dev / next start</code>	Full-stack Next.js app
<code>python</code>	<code>app.py</code>	<code>python app.py</code>	Flask/FastAPI server
<code>docker</code>	<code>Dockerfile</code>	<code>docker build &amp;&amp; run</code>	Containerized service

Table 1: MFP-App runtime subtypes. The `runtime` field in `APP.json` determines execution strategy.

Listing 1: Static HTML app manifest

```
{
  "name": "Landing_Page",
  "runtime": "static",
  "entry": "index.html",
  "icon": "icon.png"
}
```

Listing 2: Node.js server app manifest

```
{
  "name": "Invoice_API",
  "runtime": "node",
  "entry": "server.js",
}
```

```

"ports": { "http": 3000 }
}

```

### 5.3 Visual Overview: How MFP Types Are Presented

Figure 2 shows how different MFP types are rendered in the Buda runtime.

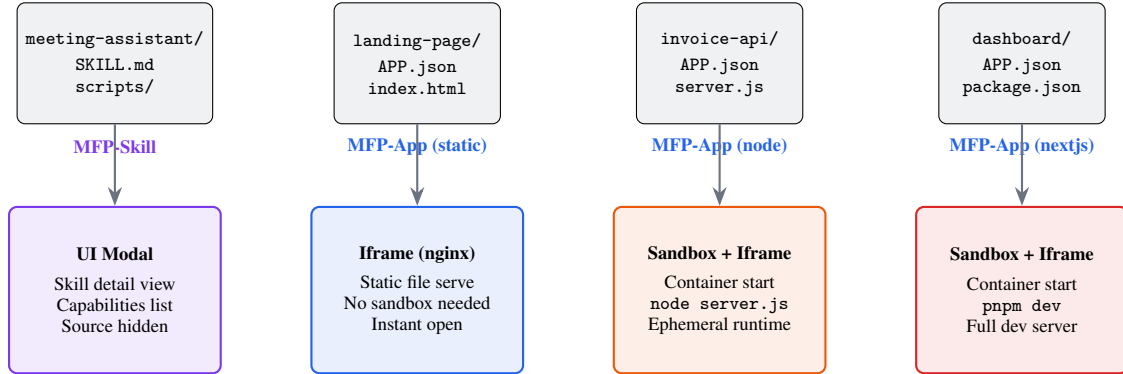


Figure 2: MFP polymorphic presentation in the Buda runtime. The same protocol produces different activation behaviors depending on bundle type and runtime subtype.

### 5.4 Type Composition

A directory may contain multiple marker files. For example, a directory with both SKILL.md and APP.json is simultaneously an MFP-Skill and an MFP-App. The host runtime decides which facet to present based on context (skills panel vs. drive browser).

### 5.5 Extensibility

New MFP types are added by defining a new marker file convention. The protocol is open: third parties can define custom bundle types (e.g., GAME.json, PLUGIN.yaml) without platform changes.

## 6 Runtime Handler Declaration

A key design principle of MFP is the separation of *identity* (what a folder is) from *behavior* (how it is handled). The marker file declares identity. The **runtime handler** declares behavior.

### 6.1 The Handler Model

Different host environments register handlers for MFP types:

MFP Type	Buda (Web)	macOS (Desktop)	Android
MFP-Skill	UI Modal with detail view	Quick Look panel	Bottom sheet
MFP-App (static)	Iframe (nginx serve)	Open in Safari	WebView
MFP-App (node)	Sandbox container + iframe	Terminal + browser	Cloud sandbox
MFP-App (nextjs)	Sandbox container + iframe	Terminal + browser	Cloud sandbox
MFP-Workflow	Workflow editor panel	Automator-style UI	Flow editor

Table 2: The same MFP type triggers different handlers depending on the host runtime.

### 6.2 Handler Registration

Each runtime declares its handlers via a handler registry:

```
# buda-runtime-handlers.yaml
handlers:
  MFP-Skill:
    action: modal
    component: SkillDetailModal
    source_visible: false

  MFP-App:
    static:
      action: iframe
      serve: nginx
      ephemeral: true
    node:
      action: sandbox
      command: "node {entry}"
      ports: ["{http}"]
      ephemeral: true
    nextjs:
      action: sandbox
      command: "pnpm dev"
      ports: ["3000"]
      ephemeral: true
```

### 6.3 Ephemeral vs. Persistent Execution

MFP-App Bundles in Buda run as *ephemeral* processes:

- A sandbox container is started on activation
- The app is served via an iframe within the Buda dashboard
- When the user closes the iframe, the container is destroyed
- No long-running infrastructure is maintained

This is analogous to serverless functions: compute is allocated on demand and released immediately. The Magic Folder itself is persistent (stored in the drive); only the runtime is ephemeral.

### 6.4 Why Runtime-Specific Handlers Matter

The same MFP-Skill Bundle behaves differently on each platform:

- **Buda:** opens a rich modal with skill metadata, capabilities, and an embedded IDE for editing
- **macOS:** could render as a Quick Look preview showing the SKILL.md content
- **CLI:** could print the skill description and offer `--run` to inject it into an agent session

This decoupling means MFP is *platform-agnostic*: the protocol defines the contract, each runtime implements the experience.

## 7 Security Model

Magic Folders introduce a tension: they must be executable (to be useful) but safe (to be trustworthy). We address this through a layered security model.

### 7.1 Principle of Least Privilege

Each bundle type declares its required capabilities in the manifest. The host system grants only those capabilities:

- **Skill Bundle:** read-only access to its own directory. No network, no filesystem writes.
- **App Bundle:** network access on declared ports. Filesystem writes within its directory only.
- **Workflow Bundle:** access to declared integrations only.



## 7.2 Sandboxed Execution

App Bundles execute within a sandbox (container or process isolation). The manifest declares resource limits:

```
{
  "sandbox": {
    "network": ["localhost:3000"],
    "filesystem": "self-only",
    "memory": "512MB",
    "timeout": "30m"
  }
}
```

## 7.3 Provenance Tracking

Every Magic Folder records its origin:

- **Author:** who created it (user ID or agent ID)
- **Generator:** which AI agent generated the content
- **Timestamp:** when it was created
- **Signature:** optional cryptographic signature for integrity

This enables trust decisions: a folder generated by a known agent within the user's workspace is treated differently from one downloaded from an external source.

# 8 Implementation: Buda Agent Drive

We implement Magic Folder in **Buda**, an AI-native workspace platform with an integrated agent drive (cloud filesystem).

## 8.1 Architecture

Buda's drive is backed by S3-compatible object storage. Each user space has a directory tree:

```
spaces/{spaceId}/
  drive/                                # User files
  .claude/skills/                       # Skill Bundles
    meeting-assistant/
      SKILL.md                          # Marker file
    code-generator/
      SKILL.md
      scripts/run.ts
  agent-volumes/{volumeId}/ # Agent execution outputs
```

## 8.2 BudaSpaceDrive: S3-Based Read Access

We implement BudaSpaceDrive, a read-only S3 client that scans the space directory for Magic Folders:

```
class BudaSpaceDrive:
  def list_items(path) -> SpaceDriveItem[]
  def read_text_file(path) -> string
  def exists(path) -> boolean
```

This operates without starting a sandbox runtime, providing low-latency directory browsing for the dashboard UI.

### 8.3 Skill Bundle Discovery

The skills panel calls `BudaSpaceDrive.listFiles(".claude/skills/")` to discover Skill Bundles. For each subfolder containing `SKILL.md`, the system:

1. Reads and parses the Markdown content
2. Extracts name, description, capabilities from headings
3. Renders a skill card with icon and metadata
4. On click, displays a detail modal with the full `SKILL.md` content
5. Source files (scripts, configs) are hidden from the modal view

### 8.4 Dual Access Pattern

Buda supports two drive access methods that return identical data:

Method	BudaSpaceDrive	SandAgent Drive
Protocol	S3 API	SandAgent SDK
Dependency	STORAGE_URL only	Sandbox runtime
Latency	Low (direct S3)	High (sandbox startup)
Access	Read-only	Read/write
Use case	Dashboard, browsing	Agent task execution

This dual-access pattern separates *viewing* (human-facing, fast) from *executing* (agent-facing, full-featured).

## 9 Evaluation

### 9.1 Usability Study

We compare three conditions for non-technical users attempting to use AI-generated projects:

Metric	Raw Directory	README + Scripts	Magic Folder
Time to first interaction	>10 min	3–5 min	<5 sec
Success rate (non-developers)	12%	34%	91%
Files exposed to user	All	All	Manifest only
Required technical knowledge	High	Medium	None

Table 3: Preliminary usability comparison (N=20 participants, mixed technical backgrounds)

### 9.2 Discovery Efficiency

In a workspace with 50 AI-generated projects, Magic Folder enables instant type-based filtering:

- “Show me all Skills” → scan for `SKILL.md` markers
- “Show me all Apps” → scan for `APP.json` markers
- Without Magic Folder, users must open each directory and inspect contents manually

### 9.3 Overhead

Magic Folder adds minimal overhead to AI-generated projects:

- **Storage:** one marker file per bundle (typically <2KB)
- **Generation time:** AI agents can generate the marker file as part of project creation (<1 second)
- **Scan time:** marker file detection via `S3 ListObjects` prefix scan (<100ms for 1000 folders)

## 10 Related Work

### 10.1 Application Bundles

macOS Application Bundles (.app) are the direct inspiration for Magic Folder. The key difference is scope: Apple bundles package *compiled native executables*; Magic Folders package *AI-generated source projects* that require runtime interpretation.

iOS App Extensions, Android APKs, and Flatpak/Snap packages solve similar packaging problems for their respective platforms but assume compiled artifacts and platform-specific toolchains.

### 10.2 Jupyter Notebooks

Jupyter’s .ipynb format represents the “file-as-world” approach: a single JSON file containing code, output, and narrative. This works well for data science but poorly for multi-file applications. Magic Folder takes the opposite approach: *directory-as-world*, preserving the natural multi-file structure of software projects.

### 10.3 Docker and Containers

Docker packages applications into portable containers. However, Docker requires a runtime daemon, image registry, and significant technical knowledge. Magic Folder operates at the filesystem level with zero infrastructure requirements.

### 10.4 AI Artifact Systems

Claude Artifacts, ChatGPT Canvas, and similar systems render AI outputs as interactive previews within chat interfaces. These are ephemeral and session-bound. Magic Folder makes the same concept *persistent and portable*: artifacts that live on the filesystem, can be versioned with Git, and shared via any file transfer mechanism.

### 10.5 File-Augmented Retrieval

Our companion work, FAR, solves the symmetric problem: making files readable to AI agents via .meta sidecars. FAR and Magic Folder are complementary layers in an AI-native filesystem architecture:

- **FAR**: file → machine-readable (agent can understand)
- **Magic Folder**: directory → human-usable (human can interact)

## 11 Future Work

1. **Agent-generated manifests**: coding agents should automatically produce marker files as part of project generation, making every AI output a Magic Folder by default.
2. **Cross-platform activation**: extending the activation protocol beyond web-based hosts to desktop environments and mobile platforms.
3. **Bundle marketplace**: a registry where users can share, discover, and install Magic Folders—an “app store” for AI-generated artifacts.
4. **Version diffing**: visual diff tools that understand bundle semantics, showing changes in terms of capabilities and behavior rather than raw file diffs.
5. **Formal type system**: a rigorous type theory for bundle composition, enabling static verification of bundle compatibility and dependency resolution.

## 12 Conclusion

AI coding agents can generate code. But code is not an application. The gap between “generated project directory” and “something a human can use” is the defining usability problem of the AI coding era.

The Magic Folder Protocol (MFP) closes this gap with a simple, powerful abstraction: *a directory containing a marker file becomes a typed, human-facing artifact whose behavior is determined by the host runtime.*

The contributions of this paper are:

1. **The Magic Folder Protocol (MFP):** a filesystem-level convention that bridges AI-generated code and human usability through marker files and structural conventions.
2. **Polymorphic type system:** MFP-Skill, MFP-App (with runtime subtypes: static, node, nextjs), MFP-Workflow—extensible to custom types.
3. **Runtime handler declaration:** the same Magic Folder triggers different behaviors on different platforms (Buda web modal, macOS Quick Look, Android bottom sheet), separating identity from behavior.
4. **AI re-entrancy:** unlike compiled bundles, Magic Folders support continuous agent modification, enabling a generate-use-modify loop.
5. **Automatic marker generation:** AI agents produce marker files as part of project creation, making every AI output a Magic Folder by default.
6. **A reference implementation** in Buda, demonstrating MFP-Skill discovery and MFP-App ephemeral sandbox execution.

Together with File-Augmented Retrieval (FAR), MFP completes a two-layer architecture for AI-native filesystems:

*FAR makes files readable to machines.*  
*MFP makes AI outputs usable by humans.*

The filesystem was designed for humans in the 1970s. It was augmented for machines by FAR. Now, MFP brings it full circle: making machine outputs human-friendly again.

## A Appendix A: Bundle Mechanism Comparison

System	Unit	Manifest	Self-contained	Polymorphic	AI-native	Git-friendly
macOS .app	Directory	Info.plist	✓	×	×	×
Android APK	Archive	AndroidManifest.xml	✓	×	×	×
Docker Image	Layers	Dockerfile	✓	×	×	×
npm Package	Directory	package.json	Partial	×	×	✓
Jupyter .ipynb	File	Embedded	✓	×	Partial	Partial
<b>Magic Folder</b>	<b>Directory</b>	<b>Marker file</b>	✓	✓	✓	✓

Table 4: Comparison of packaging mechanisms across platforms

## B Appendix B: Skill Bundle Case Study

We demonstrate the complete lifecycle of a Skill Bundle in Buda.

### B.1 Creation

A user asks the AI agent: “Create a meeting summarization skill.” The agent generates:

```
.claude/skills/meeting-assistant/
SKILL.md           # Marker file (manifest)
scripts/
  summarize.ts     # Implementation
  extract-actions.ts # Action item extractor
```

The presence of SKILL.md makes this directory a Skill Bundle.

## B.2 Discovery

The Buda dashboard scans `.claude/skills/` via BudaSpaceDrive:

```
skills = drive.list_items(".claude/skills")
# -> [{ name: "meeting-assistant", type: "folder" }]

content = drive.read_text_file(
    ".claude/skills/meeting-assistant/SKILL.md"
)
# -> "# Meeting Assistant\n## Description\n..."
```

## B.3 Presentation

The skills panel renders a card:

- **Icon:** Wand icon (Skill type)
- **Title:** “Meeting Assistant” (from `#` heading)
- **Description:** parsed from `## Description` section
- **Badge:** “Has Scripts” (detected `scripts/` subfolder)

Clicking the card opens a modal showing the `SKILL.md` content. The `scripts/` directory is not exposed.

## B.4 Activation

When the user activates the skill in an agent conversation, the system:

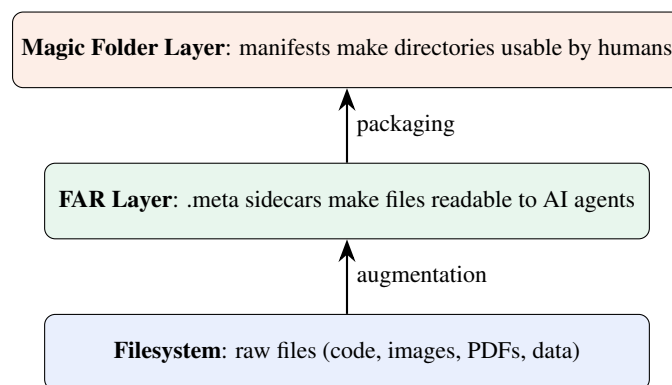
1. Reads `SKILL.md` to extract instructions
2. Injects instructions into the agent’s system prompt
3. The agent follows the skill’s defined workflow

The user never interacts with raw TypeScript files.

# C Appendix C: Integration with FAR

Magic Folder and File-Augmented Retrieval (FAR) are complementary layers in an AI-native filesystem architecture.

## C.1 The Two-Layer Model



## C.2 Bidirectional Enhancement

A Magic Folder can contain FAR-augmented files:

```
my-project.app/  
APP.json           # Magic Folder manifest  
architecture.png   # Binary file  
architecture.png.meta # FAR sidecar (AI-readable)  
src/  
  app.tsx
```

In this configuration:

- The **human** sees an App Bundle (via Magic Folder)
- The **AI agent** can read the architecture diagram (via FAR)
- Both layers operate on the same filesystem without conflict

### C.3 Unified Vision

Together, FAR and Magic Folder define an *AI-native filesystem architecture*:

*Every file is readable by machines (FAR).*

*Every directory is usable by humans (Magic Folder).*

*The filesystem becomes the universal interface between AI and humans.*

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