

AI for Software Dev

Video #3 – AI Consoles

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AI Consoles

- AI Consoles are specialized terminal applications that:
 - Have a large set of commands. Partial list of Gemini commands: /about, /copy, /directory, /help, /rewind, /init, /mcp, /tools, /skills, ...
 - Send all text inputs to remote LLM via web messaging.
 - One exception: you can execute a shell command by prepending “!”
 - Can read from and write to the local file system
- They act like agents without you providing code for the application
 - Likely to be slower and more expensive than agents
 - They don't build in local operations
- Use a platform key to access remote LLM

Advantages

- AI Consoles can read from and write to files in the local filesystem
- You don't have to write any code for the application
 - Benefit:
 - More flexible, not limited by constraints built into agent code
 - Immediately productive
 - Liability:
 - Less productive than an agent for fixed tasks

Example – Create Basic Projects

- Create Rust “Hello World” project
 - Create Rust crate structure
 - Define, build, and execute Hello Word application
 - Runs Rust code analyzer: cargo clippy
- Create C++ “Hello World” project
 - Create C++ project structure
 - Define CMake file for building
 - Define, build, and execute C++ Hello World application

Example – Prompt and Partial Response

> create Hello World project in Rust but do not run

✦ Okay, I'll create a "Hello World" Rust project for you.

First, I'll use `cargo new` to create the project:

```
✓ Shell cargo new hello_world_rust [current working directory C:\github\Jimfawcett\NewSite\Code\ai\DemoAIConsole-Gemini] (Crea...  
    Creating binary (application) `hello_world_rust` package  
    note: see more `Cargo.toml` keys and their definitions at https://doc.rust-lang.org/cargo/reference/manifest.html
```

✦ The Rust project "hello_world_rust" has been created. I'll now confirm the "Hello World" code by reading `src/main.rs` within that directory.

```
✓ ReadFile hello_world_rust\src\main.rs
```

✦ I've created the Rust "Hello World" project and verified `src/main.rs` content, as requested, without running it. `Output.txt` remains untouched. Request complete.

> run

✦ "Run" likely means executing the Rust "Hello World" project. I'll `cd hello_world_rust` then `cargo run`.

```
✓ Shell cargo run [in hello_world_rust] (Running the 'hello_world_rust' project.)  
    Compiling hello_world_rust v0.1.0 (C:\github\Jimfawcett\NewSite\Code\ai\DemoAIConsole-Gemini\hello_world_rust)  
    Finished `dev` profile [unoptimized + debuginfo] target(s) in 0.58s  
    Running `target\debug\hello_world_rust.exe`  
    Hello, world!
```

✦ "Hello, world!" output confirms successful execution of the Rust project. Request complete.

Conclusion

- This third presentation focuses on AI Command Line Interface (CLI)
 - You can find all the details here:
https://jimfawcett.github.io/NewSite/Code/CodeBites_ConsoleAI.html
- The first presentation explores:
 - AI Chat Bots
 - Use web application defined by platform to communicate with remote LLM
 - Cannot read or write local files
- The second presentation explores:
 - AI Agents
 - Use local application to communicate with remote LLM
 - Uses HTTPS-based API
 - Can read from and write to local file system