Architecting Systems to Architecting Agility

Vision AI Catalyst & Example

Part 5 of 7: Seamless Creation & The AI Difference

A Long Held Vision

The Quest for Seamless Creation

- This desire for efficiency isn't new.
- 15 years ago envisioned **customized IDE on a tablet**.
- Idea Sit with customer capture requirements visually sketch UIs.

Vision Instant Prototyping

Accelerating Understanding Alignment

⚙ Click button -> system generates basic app scaffolding (UI backend DB).

⚙ Deploy instantly to test environment.

⚙ Customer interacts with working prototype **within the same meeting**.

⚙ Imagine the **acceleration** in understanding alignment!

Ahead Of Its Time Then

Ripe For Realization Now

- Admittedly ahead of its time underlying tech wasn't mature.
- But now with astonishing rise of **GenAI** & **AI Agents**...
- That vision feels **tantalizingly close**.

The time is ripe.

The AI Catalyst

A Chance to Break the Cycle

- Emergence of powerful AI especially GenAI feels **fundamentally different**.
- Not just another tool on the complex stack.
- Potential to be an **intelligent helper**.

AI Capabilities

Understanding Intent

Automating Toil

⚙ Capable of understanding intent learning context.

⚙ Automating many complex time-consuming tedious tasks that drain energy.

⚙ Helping us get off the Tool Treadmill.

Plant Manager Example Intro

Fleshing Out the Potential

- Consider the plant manager scenario fleshed out.
- Manager walks shop floor records video narrates process captures close-ups.
- Uploads video AI system analyzes it.

Plant Manager Example AI Analysis

Vision Transcription Correlation

⚙ Uses computer vision to identify machines components HMIs.

⚙ Transcribes narration correlates with visual elements.

⚙ Might query digital manuals documentation to understand functions better.

Plant Manager Example AI Generation

Multi Modal Input to Digital Twin MVP

⚙ Based on multi-modal input generates basic 3D process flow model.

⚙ Creates interactive dashboard mockups showing key metrics.

⚙ Generates rudimentary backend logic to simulate data flow.

Plant Manager Example Deployment Feedback

Functional Prototype Within Hours

⚙ Packages this as functional **Digital Twin MVP**.

⚙ Deploys to cloud sandbox environment **within hours**.

⚙ Plant manager receives link clicks interacts with working representation.

Plant Manager Example Impact

Transformative Rapid Feedback Cycle

⚙ Immediately provide concrete feedback (″This connection wrong″ ″Need this metric″).

⚙ This **rapid cycle** of idea-to-feedback is transformative.

⚙ This isn′t science fiction tools are emerging today hinting at this.

Next

AI Across the SDLC

- How else is AI showing potential across the lifecycle?
- Next we'll look at Requirements Design Coding Testing Ops.

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