Automating the Mundane: A Practitioner's System for Engineering Leverage with AI

Alpine Investors & Portfolio Companies

Mo Battah

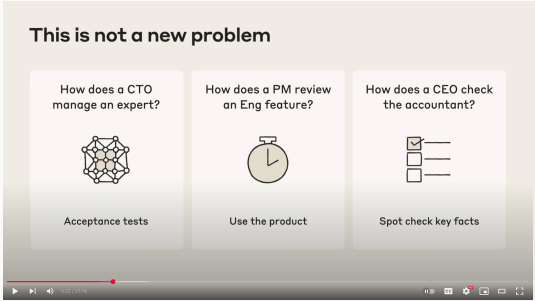
2025-08-20

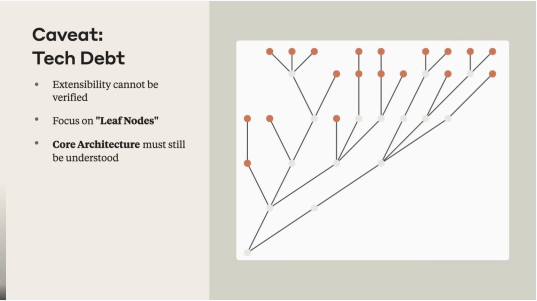
Personal Systems That Scale to Business Impact

Mo Battah
Alpine Investors & Portfolio Companies
08/20/2025

What This Talk is NOT About

Future of Software Development





So, how will we "Vibe Code" in prod?

Forget the *code* exists, but NOT that the *product* exists!

What This Talk IS About: The System for High-Fidelity AI Partnership

Today, we're architecting a system that transforms digital chaos into strategic advantage. I will introduce my 4-Stage Context Engineering Pipeline—a methodology to turn your scattered thoughts, emails, and documents into deterministic, high-value context for AI collaboration.

The Transformation Journey:

- **Stage 1:** Inception → Your thoughts become digital assets
- **Stage 2:** Storage → Scattered data becomes deterministic context
- **Stage 3:** Refinement → Raw information becomes actionable intelligence
- **Stage 4:** Assembly → Perfect context orchestration for complex decisions

Plus: Examples showing these systems in action + AI's deflationary impact

My take: AI is the great equalizer leaving only execution on the table. If you're in this room, you're ahead of the curve.

Session Ground Rules

Session Ground Rules

1. **Raise your hands!** Your contributions matter more than my content
2. **Clarify and Correct:** Share your stories and experiences
3. **This is a discussion** — jump in via chat or hand raise

About Me

About Me

Mo Battah | Recently VP, DevOps Engineering at Actabl

Since leaving last month:

- Advised on **$10M+ in VC + PE transactions** across 2 deals
- **Currently helping founders** in AI agents, cybersecurity, and defense tech
- **These systems were the operational backbone** that enabled instant, high-fidelity context for due diligence and strategic analysis

Active in Venture Capital:

- Capital efficiency is in vogue, no 'vibe coding' but tons of Cursor/Claude Code
- **Portfolio:** ProtectAI, Dreadnode, Resourcely, Kodiak Robotics, Skydio

Why this matters: *I use these systems daily to drive business outcomes and operational efficiency.*

Quick Poll: AI Tool Experience

Quick Poll: AI Tool Experience

Show of hands to gauge experience levels:

1. **Who has used Cursor / Windsurf?** *(AI IDEs)*
2. **Who has used Claude Code?** *(AI CLI)*
3. **Who has used Warp's agentic features?** *(Agentic Dev Env)*
4. **Anyone tried Roo or Cline?** *(FOSS Cursor)*
5. **Who here has worked with LaTeX for document or report generation?** *(Gold-standard typesetting)*

This helps me calibrate how deep to go on technical details vs. practical applications

The Ladder of Abstraction

From Prompting to Partnership

Most people are at Level 1. Some might be at Level 2. My favorite is Level 3.

Level 1: Conversational AI - ChatGPT, Claude, Gemini as baseline assistants

Level 2: Integrated Assistants (IDE Extensions)
- Cursor, Windsurf, Roo - they read codebases, propose plans, modify code with approval

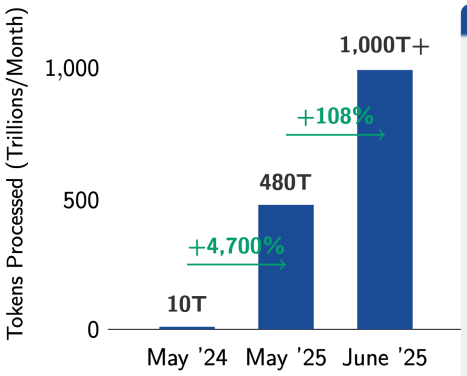
Level 3: Agentic Partners (CLI Tools) - Claude Code, Gemini CLI - operate within terminal, execute scripts, manage files

The Token Economy Reality

Google's Explosive Growth in AI Usage

Token Volume: A Leading Indicator of Google's AI Monetization

100x Growth in Monthly AI Tokens Processed in 13 Months



Key Thesis

- **Proxy for Revenue:** Token growth is a direct proxy for AI adoption and future revenue from API calls and cloud consumption.
- **Competitive Moat:** This scale builds a defensible moat through network effects and proprietary data aggregation, creating a barrier to entry.

What This Means

The world is rapidly transforming into **a world of tokens** — where these tokens have equivalency to human thought.

My approach: Replace my "negligible-value thoughts" with AI tokens wherever possible.

Examples of negligible-value thinking: - The 30 minutes spent manually collating stakeholder feedback from three different email threads before a planning meeting - The mental context-switching required to parse a dozen downloaded reports, PDFs, and logs to synthesize a single coherent summary
- Routine analysis tasks that take me hours but AI handles instantly

The Goal: Use AI as a thought partner, gut check, and improvement tool — freeing my brain for high-value decisions

So How Do You Actually Do This?

So How Do You Actually Do This?

The challenge: You can't just throw problems at AI and expect it to replace your thinking effectively.

You need a systematic approach to ensure AI has the same contextual knowledge you would have when making decisions.

Enter: Context Engineering — the 4-stage system that makes token replacement actually work.

Context Engineering: The Foundation

Context Engineering: The Foundation

"Context is everything, yet context is what's missing."

Context is gold. Without good context engineering, prompt engineering is irrelevant.

Bad context doesn't just give you bad outputs; it poisons your entire decision-making process.

Context engineering is the foundation of all effective AI use.

The 4-Stage Context Engineering Pipeline

The 4-Stage Context Engineering Pipeline

The system for manufacturing perfect, context-rich prompts

1. **Inception** → Capture high-bandwidth thought as structured digital assets
2. **Storage** → Engineer a deterministic context repository, your "second brain"
3. **Refinement** → Synthesize raw data into actionable, strategic intelligence
4. **Assembly** → Orchestrate massive, holistic prompts for insurmountable leverage

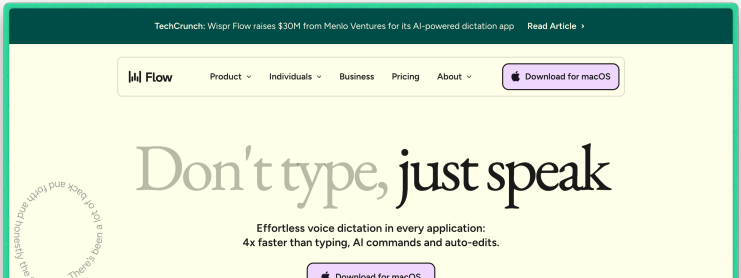
This pipeline ensures AI has the same contextual knowledge I would have when making decisions — often better, because it can cross-reference everything instantly.

Stage 1: Context Inception

Wispr Flow — High-Bandwidth Thought Capture

- ~**100K words/month** voice dictation
- **Keyboards are the bottleneck** to thought capture
- Real-time verbal brainstorming → structured AI-ready text
- Applications range from email composition to complex architecture problems

Key Insight: Your thoughts become digital assets



Stage 2: Context Storage & Management

All Context Sources → Git as Markdown

All Context Sources → Markdown Files:

- **Wispr Flow transcripts** from Stage 1 → Stored permanently
- **Call transcriptions** via Google AI Studio (free)
- **Email archives** downloaded → AI flattened → Git
- **Strategic thinking** → Career goals, brand guidelines, decision frameworks
- **Technical contexts** → Architecture challenges, project requirements
- **Documents & artifacts** → Reports, PDFs, SOWs, contracts (converted to Markdown)

Why Not MCP Servers:

- Probabilistic outcomes, unreliable retrieval
- **Solution:** Pre-processed, verified context files

Context in Action: SOW Example

Statement of Work + emails + call transcripts = complete project context

AI Query: *"Based on our SOW, emails, and call transcripts, where are we on this project? If the vendor is behind, what are our negotiation options?"*

Result: Instant situational awareness and strategic options

Security Note: Use private repos, strong permissions, and avoid committing overly personal PII or confidential business information

Example Repository Structure

Technical Decisions - Architecture reviews - Incident postmortems - Tech debt assessments

Team Management - Hiring & interviews - Performance reviews - One-on-one contexts

Vendor Relationships - Contract negotiations - Tool evaluations - Procurement decisions

Strategic Planning - Quarterly roadmaps - Budget planning - Investment decisions

Key Benefits: Deterministic ▪ AI-native ▪ Version controlled

Stage 3: Context Enrichment & Refinement

From Scattered Assets to Strategic Intelligence

BEFORE: Raw Assets

- Voice note about issue
- Email thread with stakeholders
- Jira tickets on the problem
- Call transcript discussing solutions

Scattered, disconnected, requiring manual synthesis

AI Synthesis →

AFTER: Enriched Context

Comprehensive Problem Context

- All stakeholder positions identified
- Solution options consolidated
- Risk factors highlighted
- Strategic recommendations ready

Single authoritative source of truth

Real Example: *Engineering problem voice note + team call transcript + Jira tickets → comprehensive problem context with all stakeholder views and solution options*

This transforms AI from a search tool into a strategic advisor.

Stage 4: Context Assembly & Orchestration

Prompt Tower — The Ultimate Context Assembler

VSCode Extension Features:

- Select files: transcripts, emails, reports, context files
- Custom prompt prefixes/suffixes
- **Massive context windows** ($>$100K tokens)
- One-click $\rightarrow$ clipboard $\rightarrow$ Gemini

Daily Use Cases:

- Pre-call prep with full conversation history
- Strategic analysis with complete relationship context
- Engineering problems with codebase + team discussions

Examples: Engineering Principles Applied

AI-Assisted Technical Analysis: Automating the Last Mile

- AI content + LaTeX precision
- Programmatic TikZ diagrams
- `quarto render` → Professional PDF

The AI-Powered Feedback Loop: Systematizing Self-Improvement

- Record calls $\rightarrow$ AI analysis
- Communication gap identification
- Negotiation improvement tracking

The AI Vocabulary Coach: Extending Finite Expertise Infinitely

- Norman Lewis + Tom Heehler principles
- Call transcript analysis
- Vocabulary edge expansion

Automated CRM Enrichment: Systematizing Serendipity

- Connection research + context matching (ex: fits your ideal customer profile)
- Relationship mapping (ex: 3 connections at target customer, infers hierarchy)

```
I'll research these 4 new LinkedIn connections and add them to the Master Contact Database.

● Update Todos
  └ ☐ Research Will Schnoor - Principal Investor at Venture Guides
    ☐ Research Craig Rogowski - Managing Director at Houlihan Lokey
    ☐ Research Will Chance - Principal & CEO of Atlas at Alpine Investors
    ☐ Research Steven Paterson - CTO for PE/VC Backed SaaS Businesses
    ☐ Update Master Contact Database with all researched contacts

● Update Todos
  └ ☐ Research Will Schnoor - Principal Investor at Venture Guides
    ☐ Research Craig Rogowski - Managing Director at Houlihan Lokey
    ☐ Research Will Chance - Principal & CEO of Atlas at Alpine Investors
    ☐ Research Steven Paterson - CTO for PE/VC Backed SaaS Businesses
    ☐ Update Master Contact Database with all researched contacts

● Task(Research Will Schnoor at Venture Guides)
  └ Done (12 tool uses · 43.7k tokens · 5m 47.3s)

  Task(Research Craig Rogowski at Houlihan Lokey)
  └ Did 2 searches in 11s
    Fetch(https://www.businesswire.com/news/home/20250602959605/en/Houlihan-Lokey-Expands-Global-Technology-Group-with-Senior-Hire)
    +7 more tool uses

● Task(Research Will Chance and Alpine Investors)
  └ Done (6 tool uses · 17.1k tokens · 3m 21.1s)

+ Scheming… (204s · ⚒ 771 tokens · esc to interrupt)
```

The Modular Resume System: A Case Study in "Documentation as Code"

- Extensible LaTeX system
- Source-of-truth data $\rightarrow$ Multiple formats
- AI-powered customization (Amazon-specific in 10 minutes)

The Bigger Picture

AI as a Deflationary Force

Reducing costs of critical services:

- **Skydio**: Power line inspection → Reduced electricity costs
- **Kodiak**: Autonomous trucking in Permian Basin → Lower oil costs
- **Gecko Robotics**: Autonomous structural integrity robots → Lower maintenance, higher efficiency
- **My systems**: Manual research/analysis → Automated intelligence gathering

This is the real AI revolution: Not replacing humans, but making services drastically cheaper.

Personal → Professional Transformation

These systems start personal, then naturally extend to work:

- Context engineering for business relationships → client management
- Voice capture for personal thoughts → meeting prep and follow-up
- AI-assisted analysis for personal decisions → strategic business analysis

The transition happens individually first, then organizationally. You don't need permission to start building leverage.

Case Study: AI-Powered Career Strategy

The Odyssey Plan Exercise: Feed your resume into Gemini and ask for three career trajectories:

1. **Continue Current Path** - Natural progression
2. **Pivot Path** - Different direction using existing skills
3. **Wild Card Path** - Completely unexpected possibilities

My Generated Paths: CTO, Operating Partner at PE fund, M&A Consultant, Venture Fund role, Entrepreneur in Residence

The System in Action: - **Strategic Context Files:** Career paths + "current career thinking" - **Opportunity Evaluation:** AI evaluates new opportunities against your context

Result: Like having a career coach who's thought 5-10 years ahead with high-fidelity scenarios.

Conclusion & Discussion

Why This Matters

These aren't just productivity hacks:

- Personal systems that drive real business outcomes
- Portfolio companies proving AI's deflationary impact
- Real-world validation of AI as force multiplier

It's about building systems that create actual value

Open Discussion

Questions for you:

What expensive processes in your industry could AI make cheap?

How do you currently manage context and information?

What part of your workflow would you automate first?

Discussion begins now.

Resources

Thank You

Contact: Mo Battah | linkedin.com/in/MoBattah

Open Source Repository: GitHub.com/MoBattah/EverydayAI - This Presentation - Report Generation Demo
- Modular Resume System - Prompt Library