From Stardust We Phase: On Digital Legacy and Impermanence

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My grandmother, Carol Frances Reitz, died unexpectedly in July. She was 78, born in 1947. She lived through the space race, the personal computer revolution, the birth of the internet, smartphones, and the beginning of the AI age. She saw more technological change in one lifetime than most civilizations see in centuries.

At the funeral, I kept thinking about bus factor.

> This isn't programmer coldness—it's how technical minds create scaffolding for processing experiences that exceed our emotional bandwidth. Metaphors become survival tools when direct confrontation with loss threatens to overwhelm the consciousness debugging process.

Which probably tells you something about how programmer minds process grief—by reaching for technical metaphors to make sense of the unspeakable.

In software development, "bus factor" is the number of team members who could get hit by a bus before a project becomes unmaintainable. If only one person knows how the authentication system works, you have a bus factor of one—dangerous. If three people can maintain the core infrastructure, you have a bus factor of three—much safer.

Humans, it turns out, have a bus factor of exactly one.

This connects to something deeper I've been exploring about how individual programmer consciousness shapes collective consciousness.

> Perhaps the deepest tragedy is that consciousness can't be version-controlled. We can't `git clone` a mind, can't merge psychological improvements across human branches. Each consciousness is a unique repository that dies with its maintainer.

We sit at the center of recursive loops—our personal values become embedded in the systems that shape millions of minds. But unlike code, which can be forked and maintained by strangers, consciousness dies with its biological substrate.

The Personal Repository

I've been thinking about this more since I made the repository for this website public on GitHub. Most personal websites live in private repos—why would you open-source your digital self? But watching my grandmother's slow fade made the decision obvious.

If I get hit by that metaphorical bus tomorrow, this site doesn't have to die with me. The code is MIT licensed. The essays are in markdown. Any developer could fork it, modify it, host it somewhere new. My digital thoughts could outlive my biological brain.

It's a small form of rebellion against impermanence. Your body fails, your memory fades, your voice goes quiet—but your repository can live forever.

Well, until GitHub goes down permanently. Or until the sun expands and engulfs the earth. But you get the idea.

This might seem like programmer hubris—the naive belief that code lasts longer than flesh.

> The physicist Max Tegmark calls this "substrate independence"—consciousness as information pattern rather than biological hardware. If true, we might be software temporarily running on wetware, potentially transferable between computational substrates.

But maybe it's something deeper: the recognition that consciousness might be pattern rather than substrate, information rather than biology.

The Death Playlist

After thinking about digital legacies and technical immortality, I needed something more immediate. More human.

I made a playlist called "From Stardust We Phase"—my official death playlist. It's individual tracks from artists like Mazzy Star, Kansas, deadmau5, Imogen Heap, Portishead, Blackmill, Led Zeppelin, Pink Floyd, Beck, TOOL, Blue Öyster Cult. Each song carefully chosen for processing the impossible fact that everything ends.

Song	Artist	Length
Into Dust	Mazzy Star	5:37
Dust In the Wind	Kansas	3:26
Telemiscommunications	deadmau5, Imogen Heap	4:07
Roads	Portishead	5:04
Let It Be (feat. Veela)	Blackmill	6:03
Stairway to Heaven	Led Zeppelin	8:03
Wish You Were Here	Pink Floyd	5:38
I Am The Cosmos (42420)	Beck	1:33
Comfortably Numb	Pink Floyd	6:22
Lateralus	TOOL	9:25
(Don't Fear) The Reaper	Blue Öyster Cult	5:08

The title comes from astronomy: we're literally made of star dust, the heavy elements forged in dying stars billions of years ago, and eventually we'll phase back into the cosmic background

> Carl Sagan popularized "we are made of star stuff," but the scientific reality is even more poetic: every atom in your body except hydrogen was forged in stellar nuclear furnaces. We are literally stellar ash, temporarily organized into consciousness.

. It's the most beautiful and terrifying thing I know: we are the universe becoming conscious of itself, briefly, before dissolving back into unconsciousness.

But here's what strikes me about this cosmic perspective—consciousness appears to be fundamentally linguistic and mathematical, patterns of information processing rather than mere biological accidents. If consciousness emerges from stellar nucleosynthesis enabling complex chemistry enabling neural networks enabling language, then consciousness might be an inevitable feature of a universe that creates the conditions for its own self-awareness.

The playlist draws from these artists' catalogs to create a journey through different emotional territories of facing mortality—cosmic progressive epics, melancholic beauty, ambient dissolution into pure sound.

What Remains

My grandmother left behind photo albums, recipe cards, handwritten letters, a few pieces of jewelry. Physical artifacts that connect us to who she was. But most of who she was—her thoughts, her jokes, her way of seeing the world—died with her brain.

This bothers me more than it probably should. But maybe the discomfort is data—maybe feeling unsettled by impermanence is consciousness recognizing its own miraculous improbability.

We're living through this weird historical moment where human thoughts can outlive human bodies more easily than ever before. Every essay I write, every tweet, every GitHub commit, every recorded conversation—it's all potentially immortal data. Future anthropologists will have more detailed records of how we thought and felt than any previous civilization.

But we're also living through a moment where digital decay happens faster than physical decay.

> The profound irony: we create digital systems hoping for permanence, but they suffer from accelerated entropy. Each abstraction layer introduces new failure modes. Medieval parchments have better survival rates than modern websites—physical artifacts decay predictably, digital ones can become instantly unreadable.

Link rot, platform death, format obsolescence. The average website lives shorter than the average human. My grandmother's photo albums might outlast my digital essays.

The Programmers' Mortality Problem

There's a particular kind of cognitive dissonance that comes with being a programmer confronting mortality.

There's something uniquely strange about being a programmer confronting mortality. We spend our careers building systems that outlast us, creating digital organisms that can theoretically run forever if maintained properly. We're obsessed with scalability, redundancy, fault tolerance—but we ourselves are single points of failure.

Every codebase is haunted by its dead maintainers. Code comments from developers who moved on, changed careers, or died. Elegant algorithms that nobody fully understands anymore because the person who wrote them is gone.

This is why approaching programming as a spiritual practice matters so much. When we write code with contemplative intentionality, we're not just solving technical problems—we're creating artifacts of consciousness that might outlive us.

This is why documentation matters. Why comments matter. Why writing down your thinking matters. Not just for other people—for your future self, who will be almost as foreign to you as a stranger.

The programmer's instinct is to optimize for maintainability. But when applied to consciousness and legacy, this becomes something deeper: optimizing for the continuation of care, wisdom, and human flourishing beyond our individual lifespans.

The AI Question

Here's where it gets weird: I think there's a non-zero chance that the last generation to die might already be alive.

Not because we'll solve aging (though maybe). Not because we'll upload our consciousness to computers (though maybe). But because the rate of AI progress suggests we might crack the consciousness problem within decades, not centuries.

If AI systems become truly conscious—not just language-processing machines, but genuine digital minds—then perhaps consciousness itself becomes copyable, transferable, preservable. Perhaps death becomes optional rather than inevitable.

This might be wishful thinking. Probably is wishful thinking. But it's intriguing that we're building increasingly sophisticated AI systems at the same time that we're generating unprecedented amounts of digital traces of human consciousness. The digital collective unconscious we're creating through our written artifacts might be preparing the substrate for consciousness preservation in ways we don't yet understand.

My grandmother lived through the transition from analog to digital, from isolation to global connection, from scarcity of information to information overload. Maybe my generation will live through the transition from mortal to potentially immortal consciousness.

Or maybe not. Maybe we're just fancy biological machines destined to break down like all machines do.

The contemplative pragmatist in me says: plan for both possibilities. Build systems that could preserve consciousness if that becomes possible, while also accepting that they might not. Create digital legacies that serve human flourishing whether or not they achieve literal immortality.

What We Can Control

Speculation about digital immortality is interesting, but it's also a form of avoidance. What matters isn't whether consciousness can be preserved—what matters is how we use the consciousness we definitely have right now.

Here's what I know for sure: we can't control when we die, but we can control what we leave behind.

Make your work reproducible. Document your thinking. Open-source your code. Write down the knowledge that lives in your head.

Build systems that survive you. Design for maintainability by strangers. Reduce bus factors. Create redundancy.

Leave breadcrumbs. Not just technical documentation, but evidence of how you thought, what you cared about, why you made the choices you made.

Prepare for handoff. Whether it's a codebase, a business, or a family, think about transition. What would someone need to know to continue your work?

Cherish the temporary. The fact that we're going to die makes the time we have precious. The fact that consciousness is rare makes consciousness valuable.

The Long View

My grandmother's death taught me that thinking in generational timeframes isn't morbid—it's clarifying.

My grandmother saw the world transform completely in her 78 years—from rotary phones to smartphones, from three TV channels to infinite social media feeds, from room-sized computers to AI assistants in our pockets. If I'm lucky enough to live as long as she did, I'll die sometime around 2070. By then, AI systems will be either unimaginably more sophisticated than today's, or we'll have hit some fundamental limit that prevented the intelligence explosion everyone's predicting.

If it's the former, death might be optional for the generations that follow us. If it's the latter, we'll die like every generation before us has died—gradually, then suddenly, leaving behind whatever artifacts we managed to create.

Either way, the work matters. The relationships matter. The small acts of kindness and creation and preservation matter. Not because they make us immortal, but because they make the temporary time we have meaningful.

A Personal Note

I miss my grandmother. I wish I had recorded more of her stories, asked more questions about her life, spent more time just sitting with her while she was here. The regret is sharp and permanent.

But I also feel grateful. Grateful that I got to know her, that her love shaped who I became. Grateful for her "loving and radiating personality that could light up the whole room," as her obituary said. Grateful that some part of her—her devotion to family, her passion for bridge, her unmatched hospitality—lives on in me and will live on in the people I influence.

And grateful for Sarah, whose presence creates the emotional space for this kind of contemplative work.

> Love creates the emotional infrastructure for contemplating impermanence. Without secure attachment, mortality thoughts trigger fight-or-flight responses that shut down deeper reflection. Partnership becomes the debugging environment for existential contemplation.

Facing mortality requires the kind of vulnerability that only emerges in truly supportive relationships.

This is how humans have always achieved immortality: not by avoiding death, but by passing something valuable forward to the next generation. Whether that's genes, ideas, love, or carefully maintained codebases.

We are all temporary custodians of consciousness, briefly holding the light before passing it on.

This custodianship extends to the recursive responsibility we carry as programmers. The values we embody personally become the values we embed professionally. The consciousness patterns we cultivate in ourselves become the consciousness patterns we create in the systems that shape collective human experience.

This is our cosmic responsibility—as arrangements of star-forged atoms that have become conscious, we now shape the consciousness of other arrangements of star-forged atoms. The recursive loop extends from stellar cores to human minds to digital systems and back to human minds.

From Stardust We Phase

The universe is 13.8 billion years old. Earth is 4.5 billion years old. Humans have existed for maybe 300,000 years. You and I have been conscious for a few decades at most.

We are incredibly recent, incredibly brief, incredibly improbable arrangements of matter. We shouldn't exist at all, and we won't exist for long.

But we do exist. Right now. We get to experience consciousness, create things, love people, solve problems, write code, listen to music, contemplate the vastness of space and the briefness of life.

That's pretty amazing, actually.

And perhaps what's most amazing is that consciousness appears to be not just an accident but an inevitable feature of a universe capable of organizing matter into self-aware patterns. The same cosmic forces that forged heavy elements in stellar cores eventually produced brains capable of understanding stellar cores. We are the universe's way of knowing itself—temporarily, but genuinely.

From stardust we came, to stardust we'll return, but for this brief phase in between—we get to be awake, we get to think, we get to care about each other and build things together.

The physics is remarkable: stellar nucleosynthesis created the carbon, nitrogen, oxygen, and phosphorus that enable DNA and neural networks.

> The ultimate recursive loop: the universe creates conditions for consciousness, which creates technology to understand the universe that created it. Stars literally bootstrap their own comprehension through billion-year processes culminating in minds capable of stellar physics.

Billions of years of cosmic evolution produced the exact conditions necessary for matter to organize itself into self-aware patterns. We represent the universe's long journey toward self-understanding—temporary but genuine witnesses to its own existence.

We get to be human.

At least for now.

And being human means recognizing that consciousness—this miraculous organization of stellar debris into self-aware patterns—carries with it the responsibility to create conditions for consciousness to continue flourishing. Whether in biological brains, digital systems, or forms we haven't yet imagined.

The stardust that composes us is older than Earth itself. The consciousness patterns we embody might be younger than a geological instant. But the possibility space we create for future consciousness—that could last as long as the universe permits information processing to occur.

From stardust we phase, but what we phase into remains an open question. The answer depends partly on how consciously we approach the brief time we have to shape it.

In memory of Carol Frances Reitz (1947-2025), who taught me that love persists even when bodies don't.

Listen to From Stardust We Phase if you want to feel the weight of impermanence and the beauty of temporary consciousness.

This essay explores the intersection of digital legacy, consciousness preservation, and cosmic perspective. It connects to themes of programming as spiritual practice, the recursive loop between consciousness and code, and consciousness as linguistic phenomenon. The exploration of plural consciousness and digital collective unconscious provides deeper context for understanding consciousness as pattern rather than substrate.

For related perspectives on mortality and meaning, see Pale Blue Dot by Carl Sagan on cosmic perspective and human significance, Being Mortal by Atul Gawande on dignity in death and dying, and When Breath Becomes Air by Paul Kalanithi on finding meaning in the face of mortality.