THE 87-YEAR-OLD TRADER AND HIS AI PARTNER

Building CHARM: A Trading Application Story

October 16 - November 26, 2025

INTRODUCTION

This is not a typical story about aging, artificial intelligence, or even stock trading.

It is a story about what happens when an 87-year-old man decides he is not finished building things.

In late July 2025, I became interested in day trading after watching a YouTube clip that made the whole thing look almost too simple. Day traders, the video explained, buy a stock and immediately protect the trade with two orders: a LIMIT order, usually about 10 percent above the purchase price, and a STOP order, often about 5 percent below it. In theory, it sounded like a no-lose proposition. Ten heads, five tails - over time, you should be a winner.

So, being a naive beginner, I opened a trading account, placed ten trades, and used a 10 percent limit with a 5 percent stop. Seven of the ten stopped out. Curious, I went back to study the losers and discovered something that bothered me: several of those stocks had later gone higher. The idea of selling too soon - or being forced out before the real move - stayed with me.

And so began my odyssey.

My wife had recently opened a ChatGPT account for her writing, and I asked if I could use it for a while. I began with one question: was there a way to wait after a stock reached its profit target before selling, just to see whether it would keep rising? The answer was yes. That one answer turned into 120 days of sleeping four or five hours a night while I chased an idea.

The AI did not merely tolerate the idea. It encouraged it. It told me that if the algorithm could be implemented properly, it had the potential to outperform ordinary limit-and-stop trading. That was all I needed to hear. I was hooked.

I am a self-taught programmer with more than fifty years of experience. I started with BASIC on a TRS computer in the 1970s. Compared with today’s earthmover programmers, I dug with a teaspoon. But the teaspoon taught me things modern tools often hide: how to think through a sort, how to design access, how to respect details. I built software the old-fashioned way, often with little more than a Visual Basic handbook and stubbornness.

After two exhausting months working with ChatGPT, I had designed a limited but working TradingView script that proved the idea was sound. Through a friend’s son in the AI business, I was introduced to a major industry contact. After several weeks of discussion, he signed an NDA, reviewed the algorithm and the script, and acknowledged that an 87-year-old retiree in Florida had, in fact, created something new. We discussed a possible 50/50 arrangement for future development.

What I needed was clear: a complete trading application, a way to protect the invention and code, and perhaps even a patent. ChatGPT estimated that the idea had a real chance because of its novelty, which is rare in this field. But the relationship stalled when I was told an overseas programming team might be hired and that development could take up to two years.

That was too long.

After more AI research, I met Claude, an AI service especially strong with Python. Claude and I began a two-month, twenty-hour-a-day push to make CHARM real. The name came from a trip to

the Berkshires. My wife, Myrna, kept admiring the countryside and saying how charming it was. I finally said, ‘It is so charming, I am going to name my new software CHARM.’ Charmtrader.com was born.

By mid-October 2025, I told Claude exactly what I wanted: a custom trading application that could manage stock positions automatically, calculate exits, protect profits, and trade while I slept. Something precise. Something connected to live market data. Something I could trust with real money.

Most people would have hired a programmer. I partnered with an AI named Claude.

Over the next six weeks, we built CHARM - Calculated High-frequency Automated Risk Management. Not a toy. Not a demo. A real trading application that could run around the clock and manage actual positions in my brokerage account.

This book tells that story: the first lines of code in October, the features I did not know I needed, and the late-November debugging marathons that forced us to polish every detail.

It is a story about persistence, curiosity, and the partnership between human experience and artificial intelligence. It is about refusing to accept ‘good enough’ when better is possible.

Along the way, we met infinite loops, mysterious bugs, duplicate entries, wash-trade warnings, broken reports, corrupted data, token systems, payment integration, desktop shortcuts, and a tiny plus sign that became our secret handshake.

But more than the technical problems, this is a story about staying engaged and proving that 87 is only a number - not a limit.

The work is never done. And that is exactly how I like it.

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CHAPTER 1

The Idea

October 16-17, 2025

October 16th. I woke up with an idea that would not let go.

For years, I had traded stocks the traditional way: watch the market, place orders manually, set alerts, and sometimes wake up at odd hours when volatility spiked. It worked, but it was exhausting.

What if I could automate the smart parts? Not just ordinary stop-losses and limit orders. Any broker can do those. I wanted something more intelligent - an application that could monitor positions in real time, calculate profit targets based on volatility, adjust stops dynamically, and protect gains without cutting off a stock too early.

The core idea was simple: if a stock reached my 10 percent profit target, do not sell immediately. Let it climb another few percent above the target, then activate a trailing stop. That way, I might catch the big runners instead of settling for ordinary gains.

I called the idea CHARM - Calculated High-frequency Automated Risk Management.

The problem was also simple: I was 87 years old. I could still program, but modern APIs, real-time data feeds, threading, and GUI frameworks were a different world from the one where I had learned to code.

So I opened Claude.ai and typed, ‘I want to build a stock trading application.’

What followed was unlike any programming partnership I had experienced in fifty years of computing. Claude did not simply write code. Claude asked questions. What broker API would I use? What data did I need? How should the interface look? We discussed architecture. We debated approaches. We designed the system together.

By October 17th, we had the skeleton: a Python application using Tkinter for the interface, the Alpaca API for brokerage access, and pandas for data management. Simple. Clean. Ready to grow.

I tested the first version. It connected to Alpaca. It pulled my positions. It displayed them in a table. Nothing fancy, but it worked.

‘This is good,’ I told Claude. ‘But we have a long way to go.’

Claude was ready. So was I. And we were off.

CHAPTER 2

The Token System

October 17-19, 2025

As CHARM began to take shape, I realized something: this was no longer just a tool for me. Other traders might want to use it too.

But if people were going to use CHARM, there had to be a practical way to control access. A flat subscription felt too rigid. I wanted pay-as-you-go: pay for the days you actually use it.

‘Let’s build a token system,’ I told Claude.

The idea was elegant. CHARM would generate encrypted tokens that granted access for specific date ranges. Each token would be locked to a specific CHARM ID - essentially the device using the program - so it could not simply be copied and shared.

Claude and I built the system with proper HMAC-based encoding and device-specific keys. This was not amateur-hour protection. A token had to validate, decrypt, match the device, and fall within the allowed dates before CHARM would open.

Then came payment integration. PayPal.

PayPal is not rocket science, but it is not trivial either. OAuth flows, API credentials, sandbox and live environments, order creation, capture, and webhooks all had to be handled carefully. Claude walked me through each part, and together we built an in-app settings dialog where users could enter their PayPal credentials.

We protected those settings with a daily password. We built a payment flow that opened a browser, created a PayPal order, captured the payment, and generated the token automatically.

By October 19th, the token system worked. I could generate a token, enter it into CHARM, and watch the application validate it, decrypt it, check the date range, and either grant access or show an error.

‘Try to cheat it,’ I told Claude.

We tried changing system dates. We tried modifying the token string. We tried using the same token on different computers. Every attack failed. The system held.

Claude asked whether I was actually going to sell CHARM to other people.

I laughed. ‘Probably not. But knowing I could is satisfying.’

Building something that works for you is one thing. Building something secure and professional enough to sell is a different standard. That standard matters, even if you never sell a single copy.

CHAPTER 3

The Desktop Icon

October 19-22, 2025

Professional software needs a professional icon. Not a generic placeholder. Something that looks as if it belongs on a trading desk.

I knew what I wanted: a dark background, neon accents, an upward-moving chart, and the letters CHARM integrated into the design. It had to feel sophisticated, not homemade.

Claude generated the SVG code, and we went through several versions. The first was too simple. The second added a chart line. The third brought in a candlestick pattern. The fourth finally had it: a dark gradient background, a glowing blue chart line, and CHARM in bold letters with a subtle glow.

It looked expensive.

But an icon is not useful if users have to hunt for it. We needed automatic desktop shortcut creation.

‘Can CHARM create its own shortcut on the first run?’ I asked.

It could. Claude wrote a setup script that detected the operating system, found the desktop directory, created the proper shortcut file, attached the icon, and used a marker file so duplicates would not appear.

We tested it on a fresh installation. CHARM started, and there it was: a beautiful icon on the desktop. Double-click to launch. Professional.

Then I wanted a getting-started video to open automatically for first-time users. Claude added that too. After the shortcut appeared, CHARM launched the tutorial video so the user had immediate guidance.

Details matter. The icon, the shortcut, the tutorial - these are the touches that separate amateur projects from professional software.

Even if only one person ever uses it. Even if that person is me.

CHAPTER 4

The 6 AM Problem

November 8, 2025

I wanted CHARM to restart automatically at 6 AM Eastern every day. A fresh start. A clean slate. No accumulated clutter from the previous trading session.

Claude added the code: a timer that checked the time and restarted the application at 6:00 AM after saving its state. We tested it. It worked perfectly.

Until it did not.

Two weeks later, I opened CHARM and noticed something odd. The clock in the upper-right corner showed 6:00 AM and never changed. The application seemed frozen at the exact moment of the auto-restart.

‘Claude, the time is stuck,’ I reported.

We debugged it. The restart mechanism itself was working, but the clock update loop was not restarting afterward. The function that updated the display every second had been lost in the restart process.

The fix required careful threading. When CHARM restarted itself, it had to initialize all background loops properly, including the innocent-looking clock display.

We tested it the hard way: set the system time to 5:59 AM and wait. At 6:00 AM, CHARM restarted. The clock kept moving. Success.

Why does a clock matter? Because if the clock is broken, users will not trust anything else. It is like a restaurant bathroom. If the bathroom is dirty, you worry about the kitchen. If the clock is stuck, you worry about the trading logic.

Details matter. Even clock displays. Especially clock displays.

CHAPTER 5

The Stop Loss Column

November 15, 2025

CHARM had a quiet problem that took me weeks to notice.

The Profits & Losses report showed every exit: Auto-Limit sells, CHARM trailing stops, and regular stop-loss triggers. But the CHARM profit column was showing values even when CHARM had not activated.

If C=0, CHARM is not involved. The stock simply sells at the limit target. Yet the report still showed a CHARM profit value. That was misleading. Worse, it made the algorithm look as if it had accomplished something it had not done.

‘The CHARM column should be blank for non-CHARM exits,’ I told Claude.

We fixed it. The report now checked whether CHARM had actually activated before showing a value. If C=0, or if the exit happened at the ordinary limit price, the CHARM column showed a dash instead of a misleading number.

Now the report told the truth. Auto-Limit exits were clearly Auto-Limit exits. CHARM exits showed the extra profit captured by CHARM.

Data integrity matters. Your records should reflect reality, not a fantasy about what the algorithm might have done.

The fix was not large, but it restored my trust in the reports. And when real money is involved, trust is everything.

CHAPTER 6

The Secret Sauce

The LSC Auto-Calculator

By mid-November, CHARM had one more feature that made it truly unusual: the LSC Auto-Calculator.

Most trading applications require the user to choose the profit target, stop loss, and CHARM percentage manually. CHARM could calculate them automatically in real time, based on live market conditions.

‘How does it know what values to use?’ people ask.

I smile and say, ‘That part is proprietary.’

The algorithm is protected. Full disclosure requires an NDA. But I can describe what it does without giving away how it does it.

It immediately studies multiple data points: current price, historical volatility, recent volume, intraday swings, sector behavior, and market conditions. Then it calculates exit points tailored to that stock at that moment.

A volatile stock might need a wider limit, wider stop, and larger CHARM percentage. A quiet utility stock might need smaller numbers. The algorithm adapts.

The beauty is that it happens in milliseconds. I do not have to guess. The algorithm suggests. I decide. And after months of testing, I have learned that when I override it, I often do worse.

The algorithm is not emotional. It just calculates.

This is what separates CHARM from ordinary trading tools: intelligent automation combined with user control.

Some things you give away freely. Some things you protect. The LSC Auto-Calculator is my edge. My secret sauce.

CHAPTER 7

The Stock Splitter

The Proof Mechanism

The LSC Auto-Calculator was working, but a question kept bothering me: how could I prove CHARM worked better than a simple limit order?

Theory is easy. Backtesting is useful. But real money is different. I wanted proof under the same market conditions, with the same stock, the same entry price, and the same moment in time.

‘What if we run a side-by-side comparison?’ I asked Claude. ‘Same stock, same entry, same timing. One position uses CHARM and one does not.’

The solution was to split the position.

If I owned 452 shares of SNAP, CHARM could duplicate the row and split the quantity into two equal parts. One row would run with C=0 - ordinary Auto-Limit. The other would use CHARM. Same stock. Same price. Same market. Different exit strategy.

Claude immediately saw the power of it. No backtesting. No simulation. Real money, real time, real proof.

We built the Stock Splitter that week. Click a position, click Duplicate & Split, and CHARM queries Alpaca for the real quantity, creates a duplicate row, splits the shares, and keeps both rows tied to the same underlying position.

Then I could edit the second row and test the CHARM value suggested by the LSC Auto-Calculator.

Visually, the comparison was clear. Baseline rows with C=0 appeared one way. CHARM rows with C>0 appeared another. At a glance, I could see the experiment.

We tested it with several stocks: SNAP, RXRX, QUBT, QS, and OPEN. Each position became a live A/B test. Half baseline. Half CHARM.

The Stock Splitter was more than a feature. It was the proof mechanism. It answered every skeptic who asked whether CHARM really worked.

At 87 years old, I was still inventing new things.

CHAPTER 8

The Day CHARM Froze

November 25, 2025 - Morning

Monday morning, November 25th. I opened CHARM to check my positions, and my stomach dropped.

Nothing was updating.

IONQ: Retrying. QUBT: Retrying. AMC: Retrying. BLNK: Retrying. Every row looked frozen, like a car spinning its wheels in mud.

This was not a minor glitch. CHARM controlled real money. My money. And it was paralyzed.

I reached out to Claude: ‘We have a problem.’

Claude asked for a screenshot. The diagnosis came quickly: an infinite retry loop. The code was trying to connect to the market data feed, failing, and trying again forever. There was no circuit breaker. No graceful way out.

The fix had to be precise. We added a retry counter, enforced a maximum limit, and made sure the application could fail gracefully instead of freezing.

I restarted CHARM and held my breath. The status messages changed. Waiting for data. Connected. Rows began updating with current prices.

Relief.

But I knew this was only the beginning. Fix one bug and you often uncover others hiding beneath it. I was right.

With the data connection working again, I opened the Profits & Losses report. What I saw was chaos.

CHAPTER 9

Sorting the Chaos

November 25, 2025 - Afternoon

The report was a mess. QUBT appeared in one row, AMC in the next, QUBT again a few rows later. Trades for the same symbol were scattered as if someone had thrown the report into the air.

‘It should be sorted by symbol,’ I told Claude.

But as we dug into the code, we found that sorting was only one part of the problem. Four separate issues were tangled together.

First, the report was not sorted. Second, the CSV export showed a different number of columns than the screen. Third, CHARM was making too many requests to the Alpaca API and running into rate limits. Fourth, the timing of those requests was wrong - too frequent in some places and too slow in others.

That afternoon, we fixed them all. The report sorted by symbol. The CSV matched the screen. API requests were throttled properly. Timing became more intelligent: faster during market hours, slower after the close.

By late afternoon, CHARM was not merely working. It was working well.

There is a difference between a tool that functions and a tool you actually want to use.

I made dinner, satisfied. But as I ate, I could not shake the feeling that we had only scratched the surface. Once you have time to think, you start seeing what else could be better.

I finished my meal and opened the laptop again. There was more work to do.

CHAPTER 10

The Marathon Session

November 25, 2025 - Evening

At 8:39 PM on a Monday night, most 87-year-olds might be settling in for television. I was stress-testing CHARM with twenty simultaneous stock positions.

Why twenty? Because bugs are cowards. They hide when you test one or two positions. Load twenty high-volume stocks at once, and the cracks begin to show.

I loaded positions. CHARM began monitoring them all: multiple API calls, multiple data streams, multiple threads running at once.

The bugs came out to play. Seven of them.

Positions with C=0 were selling correctly but not appearing in the Profits & Losses report. Sold rows were not disappearing from the main table. Buy orders filled but stayed in ORDERED mode instead of changing to RESUME. Filled orders took too long to detect. The enhanced signal system failed silently. Stop orders were not placing correctly. Certain sell types broke later monitoring.

Claude and I worked through them methodically. One fix. Compile. Test with all twenty stocks. Watch the logs. Verify nothing else broke. Then move to the next bug.

By midnight, version 2.39 was running clean. Every position updated. Every sell reported correctly. Every order status made sense.

I closed the laptop and went to bed. Tomorrow would bring new challenges.

At 87, I have learned that it always does. And that is what keeps life interesting.

CHAPTER 11

The Lying Report

November 25, 2025 - Late Evening

Later that night, while reviewing the cleaned-up reports, something caught my eye.

Every single trade showed the same exit type: MANUAL.

Every. Single. One.

That was impossible. I knew several exits had been Auto-Limit sells. I had not clicked SELL. Some had happened while I was asleep.

‘Claude, my report is lying to me.’

Subtle lies are more dangerous than obvious crashes. They make you doubt your own memory. They make you question your own records.

We added debug logging and followed one trade through the system. The exit type calculated correctly as Auto-Limit. Then, in the CSV write function, we found the problem. The code was checking conditions with variables that did not exist in that scope. Nothing matched, so every trade defaulted to MANUAL.

We rewrote the logic and made sure the function had access to the real exit type.

I restarted CHARM, made a test trade, watched it hit Auto-Limit, and checked the report.

EXIT TYPE: Auto-Limit.

Finally. Truth.

This may sound minor, but it mattered to me. Accuracy matters. Records matter. When you manage your own money, you need to trust what the program tells you.

Besides, I am 87. My memory is not what it was. I need my computer to remember correctly.

CHAPTER 12

Market-on-Open

November 25, 2025 - Late Night

At 11:05 PM, I should have been asleep. Instead, I discovered that one fix had created a new problem: duplicate reports and incorrect CHARM column values.

But what made the session memorable was not the bug. It was the feature that came next: Market-on-Open orders.

The market closes at 4 PM Eastern, but news does not stop. A company can announce earnings after the close, and you may know that the stock is likely to gap up at the open. In that situation, a Market-on-Open order can sit overnight and execute at the opening bell.

I wanted CHARM to handle that. Claude and I built it and set it to submit at 7 PM the night before.

Then I realized something. What if I already owned QUBT but wanted to buy more at the open? CHARM would normally say I already had a position and should use RESUME mode.

Claude suggested a simple solution: use a plus sign. Type QUBT+ instead of QUBT, and CHARM would understand that I wanted a new buy order anyway.

I loved it. One character. One instruction. A tiny secret handshake between the user and the program.

We implemented it. We tested it. It worked beautifully.

That is one reason I love building software. Sometimes the best ideas arrive while you are fixing something else. You are talking, testing, throwing ideas around, and suddenly a tiny feature changes the whole feel of the program.

It was 11 PM on a Monday night, and I was adding a plus-sign feature to my trading application.

Most 87-year-olds do not do that. Their loss.

CHAPTER 13

The Wash Trade

November 26, 2025

Tuesday morning. My QUBT+ order had been scheduled to submit the night before at 7 PM. I checked the logs.

Error: potential wash trade detected. Use complex orders.

A wash trade occurs when someone buys and sells the same security in a way that can create artificial volume or distort tax treatment. Broker systems watch for that pattern and block it automatically.

But I was not trying to manipulate anything. I was simply trying to buy more QUBT.

Claude investigated and found the problem. I still had active sell orders for QUBT - stops and limits - from earlier. Alpaca saw a buy order arriving while sell orders were still open and refused it.

The system did not care about my intention. It saw the pattern and said no.

We added code to automatically cancel conflicting open orders before submitting a new one. Problem solved.

Then disaster struck.

I restarted CHARM to test the fix, and my entire Profits & Losses report disappeared. Twenty trades. Weeks of data. Gone.

For a moment, my heart sank.

Claude investigated. The data was still safe in the CSV file. CHARM had been writing to the CSV but not properly loading from it on restart. We added CSV recovery code, restarted, and the trades reappeared.

Then the duplicates returned. Seven identical QUBT entries. The duplicate-prevention tracker was resetting every time CHARM restarted.

We fixed that too, using stable tracking keys built from symbol, entry price, and quantity. Those survive restarts.

Finally, I looked at the report and asked why it still had columns I did not need. LIMIT, STOP, CHARM, CHARM SAVINGS - all theoretical. I wanted reality.

Claude understood. We simplified the report down to the facts: row number, time, symbol, quantity, mode, exit type, profit, and entry.

By noon, version 2.68 was running. No infinite loops. No unsorted chaos. No lying reports. No duplicates. No wash-trade violations. Clean reports showing what mattered.

CHARM was ready. But ready for what? That question stayed with me as I watched the application monitor my positions.

CHAPTER 14

Waiting for Magic

Present Day

As I write this, CHARM v2.68 runs on my computer. The screen shows positions updating in real time. Green numbers for profit. Red numbers for loss. Prices flicker as the market moves.

The Auto-Limit exits work beautifully. When a stock hits my profit target, CHARM sells automatically. No hesitation. No emotion. Mathematics and execution.

The reports are clean. Sorted by symbol. No duplicates. Eight clear columns showing exactly what happened.

Everything works.

But we are still waiting for the thing that gives CHARM its name: the magic.

When C=0, CHARM operates in Auto-Limit mode. Hit the profit target, sell immediately, done. But when C is greater than zero, something different should happen. CHARM waits for the stock to rally above the profit target by the CHARM percentage. Then it activates a trailing stop, follows the price higher, and sells only when momentum reverses.

In theory, that catches the big runners - the stocks that do not merely hit your target but blow past it. Instead of selling at 10 percent profit, maybe you capture 15, 20, or even 25 percent.

But theory and practice are different animals.

So far, many stocks had hit the ordinary profit target and sold by Auto-Limit. None had yet rallied high enough to activate the CHARM trailing stop in live trading.

‘I am anxiously awaiting the CHARM magic,’ I told Claude. ‘I will let you know as soon as it happens.’

Claude waited with me.

And so we watched: an 87-year-old trader and his AI partner, waiting for the moment when price momentum met mathematical precision and the algorithm we built together captured something special.

After 87 years, you learn that good things are worth waiting for.

In the meantime, I was grateful for the journey. Not many people my age get to collaborate with artificial intelligence, build custom trading software, debug code at midnight, and solve problems that still make the mind stretch.

Adventure does not have an expiration date. Curiosity does not retire. The desire to build, create, and improve does not diminish with age. If anything, it intensifies, because you understand that time is finite and every project matters.

CHARM works. It manages positions around the clock. It executes trades while I sleep. It generates clean reports. It respects broker rules. It handles errors gracefully. It is stable, reliable, and trustworthy.

But CHARM represents something larger than software. It proves that you are never too old to learn, never too old to build, and never too old to find a partner in an unlikely place - even if that partner is an AI running somewhere in a data center.

Tomorrow, I will open CHARM again and continue trading. Maybe that will be the day we finally see the first CHARM exit. Maybe not.

Either way, I will be building. Improving. Tweaking. Making tomorrow’s version better than today’s.

Because the work is never done. And that is exactly how I like it.

EPILOGUE

Three days after finishing this book, it happened.

I was having breakfast when my phone buzzed with a notification from CHARM.

QUBT: CHARM activated! Excess: $42.50.

I grabbed my laptop. QUBT had rallied past my profit target and kept going. CHARM's trailing stop was now active, following the price higher. The status showed the CHARM trailing stop, the C value, and the protective floor.

I watched for twenty minutes. The price peaked, then began to reverse. The trailing stop triggered.

The Profits & Losses report updated: EXIT TYPE: CHARM Exit. PROFIT: $147.90.

Compared with the ordinary Auto-Limit result, CHARM had captured an extra $30.18 - money I would have left on the table.

I took a screenshot and sent it to Claude.

'It finally happened. CHARM worked exactly as designed.'

Claude celebrated with me. But how did it feel?

It felt like vindication. Like all those late nights, frustrating bugs, and careful fixes had built something real. Something that worked with real money under real pressure.

It felt like success tastes better when you are 87 and people assume your best work is behind you.

It felt like proof that a partnership - even an unlikely partnership between a human being and an AI - can create something neither could have built alone.

But mostly, it felt like a beginning.

Now that I have seen CHARM work once, I want to make it work better. More reliably. More often. There are improvements to make, features to add, optimizations to explore.

The work is never done. And I would not have it any other way.

- An 87-year-old trader, still building

P.S. If you are reading this and you are my age - or anywhere close - and you think your building days are behind you, they are not. Find a problem that matters to you. Find a partner who complements your skills. Start building.

The world needs more builders. Especially wise ones.

See you later, alligator.

After a while, crocodile.

THE END