

TRIAL 3 - DIFFICULT EVE

The Lund Algorithm Chapter 7:Eve's disappearance

Rick sat on the edge of his chair, the phone call from Eve replaying in his mind. Her voice had been urgent, her words clipped. “Rick, this is big. Really big. I’ve been processing data... private banks. Accounts. There’s a pattern, the same amount of money moving through all of them. I have a program to track it, but it’s slow. Too slow. I need your help.”

She had paused then, her breath hitching. “I think I’m being watched. Be careful.”

Now, sitting in the dim light of his apartment, Rick could feel the weight of her warning pressing down on him. He’d agreed to meet her at a nearby café, but she hadn’t shown. Calls to her phone went unanswered. That wasn’t like Eve. She was the kind of person who’d text you back in the middle of a hurricane.

Rick had tried not to panic, but the growing knot in his stomach drove him to action. Using a few of his old contacts, he tracked down her home address and decided to pay her a visit. The late autumn wind bit through his jacket as he arrived at her building. The front door was ajar, swinging slightly in the breeze.

Something wasn’t right.

Rick climbed the stairs two at a time, his pulse quickening. Eve’s door was cracked open. He pushed it wider and stepped inside. The sight stopped him cold. The place was a mess. Papers were strewn everywhere, furniture overturned. Her computer, usually humming quietly on her desk, was a charred ruin, blackened and melted as if someone had taken a blowtorch to it.

“Eve?” he called out, his voice echoing in the empty space. No answer.

But Rick knew Eve. She was meticulous, a digital packrat who never trusted a single device with her data. She always had backups, tiny memory chips she stashed in odd places. Rick glanced around the room, trying to think like her. Then he spotted the mug on the shelf above her desk—a chipped ceramic thing with a faded image of a cat. Eve had always joked that it was her “backup guardian.”

Rick grabbed the mug, turned it over, and felt a tiny chip taped to the bottom. Relief washed over him as he pocketed it. Whoever had trashed the place either hadn’t known about Eve’s quirks or hadn’t cared to look too closely.

Back home, Rick inserted the chip into his computer and opened its contents. As expected, the accounts were there, along with a Python script labeled “Eve.py.” He ran the program and watched as it began to process the data, its pace agonizingly slow.

The script confirmed Eve’s findings: money was being moved between private banks in precise amounts and in a specific sequence. It was like watching the gears of a vast, invisible machine.

But the program's analysis was incomplete. At its current speed, it might take months to sort everything out.

Rick leaned back in his chair, his mind racing. He needed to optimize the script, speed up the process. Somewhere in these accounts were the names of the people orchestrating this financial dance, and those names were the key to finding Eve. Eve had said she was sure the same amount of money was moving from one account to another. All she had to do was find the chain of transactions. Someone in Apex Bank transferred money to someone else. That person had moved the money to Blue Ridge bank. The moved it from them selves to another fake account. The fake account in Blue Ridge moved the money to Crestview Financial, another shell bank. That money would be transferred to another person who moved it to Delta Trust Bank a known bank used by drug dealers and arms dealers the world over. It would be same money in each transaction as it had been done in micro seconds. The only hope was it would be unique. Eve must have been right other wise they wouldn't have grabbed her.

Ricks hands trembled slightly as he typed. The stakes were higher than he'd ever imagined. And as he glanced at his window, half-expecting to see shadowy figures lurking outside, Rick realized that Eve's warning hadn't been for nothing.

"Hang in there, Eve," he muttered, his fingers flying over the keyboard. "I'll find you."

Don't expect to run Eve_Big on Non optimised code.

```
dir = 'Eve_Small/'
```

When you have code which goes fast you should be able to change to

```
dir = 'Eve_Big/'
```

Info

OK forgive me the whimsy , this program takes a long time to process and thought about this while I was waiting.

How difficult is this?

Very

IF you have done everything so far you have near 70% so I need something to really tricky to really let people shine. That said I've told you the solution in the lectures, its buried in there someone place.

How to know when you have made it fast enough.

Then you can process Eve_big and get an answer. The speed increases are chilling.

How Serious are you about the profiling this ?

I think it's pretty obvious what the problem are but I would still like a before/After profile.

Look on blackboard for the league table

You can do better than this (even with out a faster machine this was on my laptop) **but you don't need to.**

To help you I will put up a league table. This will have speeds for no improvement , Par (that is as good as my score) and beyond par which I am interested to see.

Eve_Small - impossible to get a result for Eve_Big

No improvement	Pro result	High score
1	293178.17	