

1 **Short Story: The Data Mines of Moria**

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30 Fig. 1. Our protagonist of the following short story. This teaser image was created with the AI program Midjourney¹.

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32 The means of obtaining data have changed dramatically in the past few years. Data is extracted by data miners, who collect it using
33 traditional excavation tools. Fueled by the eradication of data ownership rights, data mining became a promising, yet physically and
34 mentally exhausting, profession to sell data to cooperations for an income. The sold data ores are then used by companies to learn
35 more about their customers, show targeted ads, and sell hyper-personalized products. This paper tells the story of how data mining
36 became necessary to sustain the human population’s prosperity.

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41 <https://doi.org/10.1145/nnnnnnnn.nnnnnnnn>

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44 ¹<https://www.midjourney.com/>

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53 *The air was unpleasantly dry and thick. Each breath was more exhausting than the one before and the cough medicine*
54 *she took just before the start of her shift helped little in reducing the burning sensation that radiated from her lungs. Her*
55 *muscles ached. Her eyes watered. At least the blisters on her hands had finally healed up, first turning into scabs and then*
56 *slowly, but surely becoming calluses. The almost maddening pain that felt like her head was stuck in a vise though was still*
57 *as bad as it was on her first day down in the mines. It had only been a month now since she started working here, but it*
58 *already felt like an eternity. Being a data miner was tough work nowadays, demanding every last ounce of energy that one*
59 *could muster up, both physically and mentally. And as she kept swinging her pickaxe, slowly unearthing some bits of data*
60 *that would be worth mere pennies, if at all, she wondered how it all came to this. She still remembered the pleading words of*
61 *her father on the day of her graduation.*

64 They all stood just outside their school's assembly hall, wearing suits that were too large and dresses that were
65 too sparkly, but proud of themselves. They just graduated! Years of schoolwork had finally paid off, and they were
66 ready for the world. Or at least they felt like it. Of course, nobody could anticipate what the next years would bring.
67 Mass unemployment. Bank runs. Riots. Failing states. But why would they? The economy was finally recovering, being
68 boosted up by a tech sector that went head over heels after the new legislation just passed the "Securing Prosperity
69 by Asset Transgression (SPAT) Act of 2023", essentially allowing all companies to claim ownership of your data if
70 that were to be deemed necessary to ensure the ongoing economic well-being of the company itself. A paradigm shift,
71 they called it. Sure, some privacy activists demonstrated against it, calling it a "grotesque violation of any privacy and
72 self-determination rights", but nobody seemed to listen back then. After all, she and her friends were graduating at just
73 the right time to start working for those big tech conglomerates. At least that's what they were being told by most of
74 their parents, teachers, and politicians. It seemed perfect. And yet, her father thought differently. He was a data miner
75 at some medium-sized business located just outside the city limits back then, selling lab-grown meat and other meat
76 derivatives. She knew that the job meant very much to him, and up until her graduation, he always seemed to wish for
77 his daughter to become a data miner as well, but the SPAT act changed his mind. He became resentful of his work,
78 feeling tremendous guilt for rummaging through deeply private data just to find some new way of advertising their
79 products, trying to marginally increase their sales. Scanning security video feeds to find out what potential customers
80 eat and like, checking their blood values from a recent trip to the doctor to create hyper-personalized ads for "the steak
81 that reduces your cholesterol" or "the chicken tender for a healthy liver." During this one night, while all her friends
82 were dancing and celebrating around her, her father told her, with tears in his eyes, not to become a data miner. That
83 was five years ago.

89 *A loud bang brought her mind back to the work before her. The ground shook violently, sweeping her off her feet, but she*
90 *got up again quickly. A couple of seconds later, the rumbling sounds slowly ebbed away. A crypto mine was opened just last*
91 *week across the excavation site, and the "concerned parties" had plenty of resources to get to the coins as fast as possible.*
92 *She never understood the buzz around those cryptocurrencies, but while she dug through some old Instagram ore by hand,*
93 *they were blasting half the mountain away just to get a bit of a coin. Clearly, they were doing something of value; how else*
94 *would they be able to pay for all those explosives and dredges?*

97 She enjoyed the first few years of being a data miner. The SPAT act effectively enabled her and her colleagues to
98 use huge amounts of data that were simply not available for companies to use just a few years back. The whole ethics
99 department of the company she worked for was shut down just a few days after she started working. After all, if the
100 data belongs to the companies, who could argue against them using it as they see fit? For about four years, working in
101 any data-driven environment was a fever dream. If one could think of it, it would be implemented. Cafés creating the
102 perfect cup of coffee for you based on the amount of sleep you got last night, automatic ordering of new clothes as soon
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105 as the cute boy on the metro heard about the newest fashion trend or just the usual parcel of vitamins in the mail after
106 a night of drinking. The sky was the limit, so it seemed. But as the tide rises, the tide falls. And so it went.

107 *The pickaxe made a thumping sound as it dug itself into the ground. Again. And again. Her work was monotonous,*
108 *exhausting, and debilitatingly tedious. Until... Clunk! Her eyes widened, and she could feel her pulse in every part of her*
109 *body. What did she find? A valuable family picture that she could sell to a heritage site, maybe some statistics about the*
110 *influence of mobile devices on mental health, or maybe even the big treasure... a private message from one famous person to*
111 *another. Depending on what she would find, she could either personally clean it up, wrangle it into something useful and*
112 *even validate it before selling it to the best bidder. Or, instead, she could sell her raw data to big data preprocessing factories*
113 *in bulk. They had the tools to merge, filter, and even normalize TeraBits of data, something that she, as a freelancer, could*
114 *only dream of. She switched to a chisel, slowly digging, uncovering the data bit by bit, but the disappointment quickly set in.*
115 *Just another Twitter hate thread. Worthless on the legal market and not dehumanizing enough to be worth anything on the*
116 *dark web. Well, maybe next time.*

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120 At first, stagnation set in. While some companies made a lot of money during the first couple of months and years
121 after the SPAT act, every company got the hang of it sooner or later. By then, her father had already quit the business
122 for quite some while. He moved to a small shed far into the woods unbeknownst to most people, and while she visited
123 him every couple of months, their relationship deteriorated fast. At first, he could still excuse her naïvite for wanting to
124 work as a data miner, but as time passed, he became resentful of her. She actually enjoyed her work. Her father called it
125 "exploiting the people" and "having no respect for privacy," but to her, it was a challenge and oh so much fun, finding
126 new correlations in the data, finding new ways to analyze and advertise. Sooner rather than later, though, everyone
127 caught up. And now, with every economic entity having full access to all the data they could ever wish for, competitive
128 advantages were no more. Sure, some company might have found a novel way of analyzing the medicine schedule
129 in retirement homes to play out advertisements for funeral deals to their loved ones at just the right time, but after a
130 couple of weeks, every funeral service in town would use that approach. Everything slowly ground to a halt. The next
131 months were a blur, the total economic collapse had many consequences, and none were pleasant to remember. She
132 tried not to think too much about that time. The leaders of her country only saw one distinct possibility to save, well,
133 everything. The companies, the people, the country. Something had to be done. With that in mind, they passed the
134 "Total Appropriation for Preserving Sustentation (TAPS) Act of 2027". The complete reversal of the SPAT act, turning
135 everything upside down once again, a shift from one extreme to another. All data were to automatically be appropriated
136 by the state, and companies had to earn ownership of the data. An artificial scarcity to ensure fair competition. And
137 with mixed reality having had such big developments in the last years, every possible data representation and collection
138 method was potentially viable. Eventually, the inspiration for a fair distribution system came from before data was even
139 a relevant or at all defined concept. Mines.

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145 *Sometimes she thought back to how her dad's workplace looked; she visited him at work sometimes when she was still*
146 *young. A standing desk, with a small treadmill below, to make sure not to sit all day. She would have loved for that to be her*
147 *biggest concern right now. Perhaps she should have listened to him. Cloud engineers had a fun job; fluffy servers sound*
148 *much more fun than raw, dirty data mining. But who knows, maybe the next golden data table was just one pickaxe swing*
149 *away...*