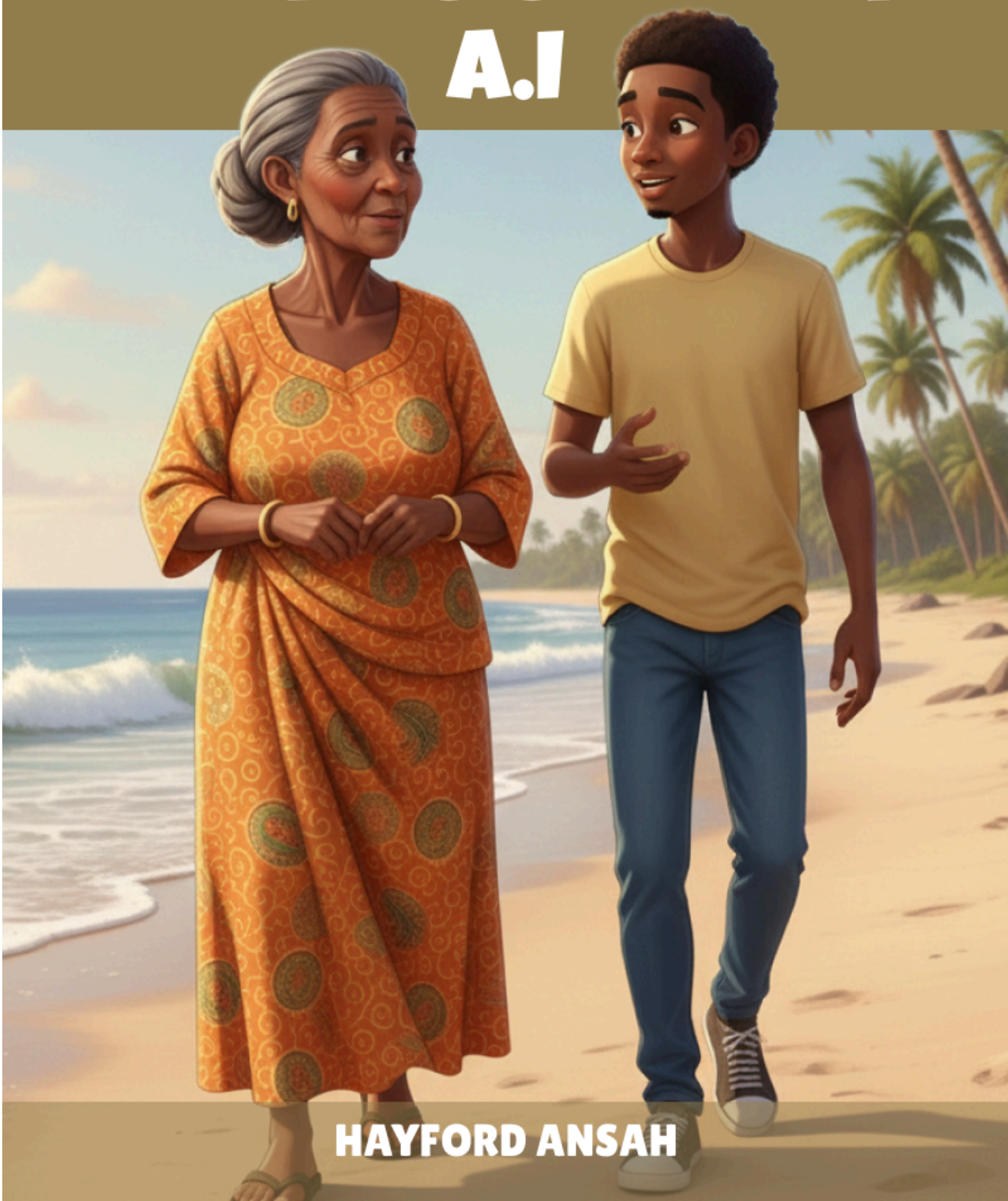
IF GRANDMA GETS THE FUNDAMENTALS, SO CAN YOU!

TEACHING GRANDMA A.I



HAYFORD ANSAH

STORY-TELLING. EDUCATIVE. ENTERTAINING

TEACHING GRANDMA A.I

IF GRANDMA GETS THE FUNDAMENTALS, SO CAN YOU!

BY HAYFORD ANSAH

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First Edition

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PREFACE

Following the release of ChatGPT in 2022, AI quickly became a household name. Back then, I was a full-time software engineer in a very demanding industry, so I had very little time outside of work to keep up with the rapidly evolving AI space.
Regardless, I made it an objective to master AI by the end of the year. You know, "aim for the sky, and if you fall, you land on the moon" kinda vibes. Ladies and Gentlemen, I didn't even make it to the atmosphere, let alone get to the moon.

ISSUES WITH LEARNING AI

After deep introspection, I found the root causes of my struggle. The main reasons are outlined below:

1. AI papers are way too technical

While many influential AI papers are publicly available, they are usually written by PhD-level researchers. And for some reason, the authors assume everyone has the same qualifications. These papers often require you to be up-to-date on your calculus, statistics, vectors, and algebra. Well…I guess we are not their target market.

2. Too much tech can get boring

Technical explanations can quickly become boring. People prefer something enjoyable and intuitive that they can relate to, creating a perfect blend of entertainment and education.

3. Lack of comprehensive and beginner-friendly AI resources

Finding a complete and easy-to-digest resource was like finding a needle in a haystack. The comprehensive ones are 500+ pages long and assume you have a prerequisite in maths and statistics. The situation was not better on YouTube either. Most of the videos on AI were highly specialized, or creators were releasing very shallow content just to chase trends and views.

THE NEED FOR THE "TEACHING GRANDMA AI" BOOK

Hear me out, if I, a professional engineer with my background in mathematics, statistics, and computer science, struggled at first to get the intuition, then what about a non-technical person?
At this point, it became clear that there was a real need for a simple, intuitive, and entertaining explainer content for people who want to know how AI works.

So I took it upon myself to solve that problem. I challenged myself to take this project one step further: **To explain AI in a way my Grandma could understand**.

WHO SHOULD READ THE "TEACHING GRANDMA AI" BOOK

Teaching Grandma AI is the culmination of years of studying AI, summarized and distilled into entertaining and easy-to-read chapters. This is suitable for:

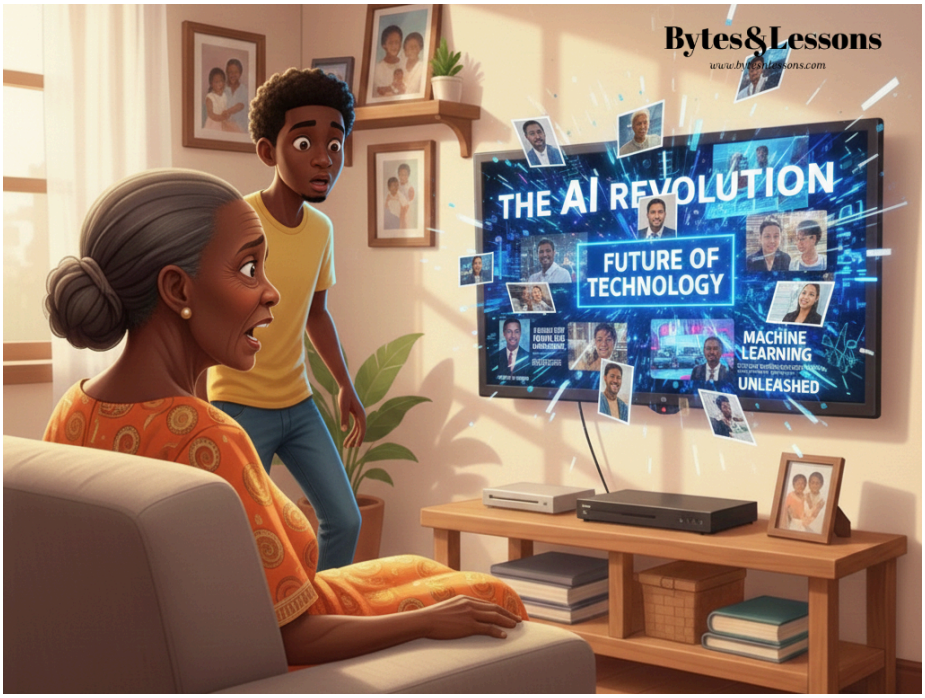
1. **Absolute beginners** who want to truly understand AI without the hype,
2. **Professionals** who want a solid recap (And maybe even learn something new).

CHAPTER 1
TEACHING GRANDMA THE MEANING OF AI

It's almost sundown. A warm, bright light from the setting sun illuminates Grandma's living room. Grandma is sitting alone on the living room couch, enjoying her favorite cat videos on the TV.

All of a sudden, the videos of these cute, fluffy kittens end, and the next video is flooded with AI headlines, news clips, and familiar tech faces flashing by.

She leans closer and calls Kofi her grandson, who is in the next room. Kofi runs to the living room with a concerned look on his face.



Grandma: [With a confused look] What are all these that I'm seeing on my screen, and why has it taken over all my favorite cat videos?

Kofi: They are all news on AI, and you are seeing them because they are now the talk of the town. [Kofi's concerned look now turns into a smile].

Grandma: A.I? Is it short for something? It must be "Always Interrupting" the way it keeps popping up everywhere.[Grandma said, visibly annoyed]

Kofi: [Kof Laughs]. No, Grandma, let me explain what it is.

Grandma: Okay, I'm listening, teach me the meaning of AI like I am 5… or 80.

Kofi smiles again and takes a seat beside Grandma on the couch.

WHAT IS AI?

AI is a field in computer science that aims to enable machines to reach human-level intelligence, such as learning, reasoning, planning, and decision-making.

Grandma: So AI is not a robot stealing my pension? Thank God. You mentioned "Computer Sense."[She said, pointing to her forehead] What is it?

Kofi: Oh, Computer Science?

Grandma: Yes, Computer science, which one is that?

WHAT IS COMPUTER SCIENCE?

Kofi: Computer science is the theoretical study of how computers work and how they can be used to solve problems. This is a really broad field of study, and AI is just a slice of the cake.

Grandma: So, computer science is just theory, not the TV you keep staring at all day?

Kofi: Yes, Grandma. Computer science is mostly theory. And by the way, the "TV" in my room is a computer. I use it mostly for school projects.

Grandma: Really, I thought you were just being lazy in there. [She said jovially]. Anyway, you said it was a broad field. Tell me more.

Kofi: Yes, besides AI, there are fields like :

OTHER FIELDS OF COMPUTER SCIENCE

Software engineering: the end-to-end process that goes into designing and implementing instructions for the computer to solve specific tasks. Popular software includes: Microsoft Word, Gmail, Google Chrome, WhatsApp, and TikTok.

Grandma: I see, so WhatsApp and TikTok are the products of software engineering?

Kofi: Yes. They all follow instructions to fulfill their various tasks.

Computer systems and networking: the study of how to design, build, and manage computers, and also how they can communicate with each other. A brainchild of this field is the Internet, which we enjoy today.

Grandma: Internet? Is it the one that allows me to talk to family members overseas?

Kofi: Yes, you can communicate with them because all our devices are networked.

Human-computer interactions: The study of how to make it easy and enjoyable for humans to interact with machines. This field bridges the gap between machine and

human psychology. Some applications include:

- Graphic design
- UI/UX Designers
- Virtual Reality
- Augmented reality
- Hardware interface design

Grandma: Is this what makes it easy for us to use the software on our phones?

Kofi: Yes, all computer systems, including hardware.

Cybersecurity: The study of how to protect hardware, software, and data from threats. Advancements in these fields led to the creation of sophisticated anti-viruses, encryption algorithms, Access Control methods, and Network security.

Grandma: So this is like the police inside our phones.

Kofi: Haha, yes. Precisely.

Database Management and Big Data: A field that specializes in how to collect, process, and store data efficiently (and in large volumes) for later retrieval. Professionals in these fields include:

- Database Admins
- Data scientists
- Data Analysts
- Big Data Engineers

Grandma: I guess the cabinet in which they store all our information is the database?

Kofi: Yes, Grandma, and the administrators make sure they are secured and well-organized.

There are several intriguing applications of computer science, such as robotics, game development, cloud computing, IOT (Internet of Things), and quantum computing.

Grandma: Haaa, my grandson, the computer scientist. [Grandma said proudly]. I am happy to know all the tuition fees we are paying are being put to good use. Now tell me more about this AI.

Kofi: Ok, let me tell you more about the levels of AI based on predicted growth.

Grandma: Ahh, wait…, AI can grow?… Like, from babies, teenagers, to grown adults?

Kofi: Yes, AI research is still ongoing, and there are many more discoveries to be made.

LEVELS OF AI BASED ON PREDICTED GROWTH

Artificial Narrow Intelligence: Also known as weak AI. This is an AI that can perform one specific task, like language translation or face recognition.

Broad AI: They can perform multiple tasks across different domains like chatting, speaking, reasoning, and understanding videos.

Grandma: Wow… just tell me which one we are before I start panicking.

Kofi: As of 2026, we have achieved Broad AI. AI Tools like ChatGPT and Gemini can do more than just chat with users; they can also understand sounds, images, and videos.

Artificial General Intelligence, AGI: An AI with human-level intelligence. It can perform any intellectual task that a human can.

Artificial Super Intelligence, ASI: An AI that surpasses human intelligence

Grandma: Hold on! Did I hear you say an AI that surpasses human intelligence?

Kofi: Yhup.

FOOD FOR THOUGHT

Grandma: Do you think we must make an AI surpass human intelligence? What are the advantages and disadvantages of this? Let Grandma know your thoughts.

CHAPTER 2
TEACHING GRANDMA THE HISTORY OF AI: PART 1

On a sunny Saturday afternoon, Grandma and Kofi visit the Cape Coast Castle to learn more about Ghana's history. They enter the castle, having a conversation as they walk and look around.

Grandma: People really kept everything, didn't they?

Kofi: Yes, the ones that mattered and with greater historical significance.

Grandma walks towards the lined-up cannons facing the ocean. She points to one while talking to Kofi.

Grandma: Yes, I can see that. Look at all these. Technology has indeed come a long way.

Kofi: Yes, it has. That makes me wonder, [Kofi stares at the sky thoughtfully.] Is there a museum for AI?

Grandma: Museum for AI? Didn't this thing appear only yesterday?

Kofi: On the contrary, AI has been around for over a century.

Grandma: What! Is AI older than me? [Grandma said, with shock in her voice]

Kofi: Haha, yes. After this tour, let me also give you a tour through time, about the history of AI.

Grandma: Hold on, are we going back in time? Should I pack snacks for our journey?

They both laugh.

MANKIND'S FIRST EXPOSURE TO AI

DEPICTION OF TALOS IN THE 1963 FILM, JASON AND THE ARGONAUTS

Mankind's first exposure to the idea of AI can be traced back to Greek mythology. There are stories of how Hephaestus, an ancient Greek god, crafted several robots for specific tasks.
One of the most renowned examples is Talos, A giant, automated bronze robot crafted to protect the island of Crete. This Colossal robot performs its duty by circling the island three times daily and hurling rocks at any incoming threats.

Grandma: Interesting, AI existed in our imaginations and in stories long ago?

Kofi: Yes.

Grandma: I see, tell me more.

Kofi: Let's jump to the 1900s, where the modern history of AI starts.

MODERN AGE

As much as the stories inspired and made us enthused about AI, no one knew what intelligence truly meant. In fact, there was nothing like "Artificial Intelligence" at that time. Modern-day AI started with a simple philosophical question: **What is intelligence?**

Is it the ability to solve a problem?
Is it the ability to generate original and new ideas?
Is it the ability to reason?
No one was sure.

1950 - ALAN TURING: WHAT IS INTELLIGENCE?

In 1950, Alan Turing wrote a paper titled: Computing Machinery and Intelligence. In the paper, he proposed to answer the question: Can Machines Think? He introduced the Turing test, a standard method to test if a machine was intelligent. A machine passes a Turing test if a human can't tell if it's a machine they are communicating with or another human.

Grandma: So, you get a prize if a computer can deceive you?

Kofi: [Laughs] Yes. There was a competition called the Loebner Prize that did exactly that.

1951- MINSKY'S NEURAL NETS

In 1951, Marvin Minsky built the world's first wired neural network learning machine, SNARC. This tech was way ahead of its time and would later lay the foundation for modern-day machine learning.

Grandma: Neural Nets? Is that like the fishing net your grandfather used?

Kofi: Not quite, I will tell you more about neural networks later.

1956 - ARTIFICIAL INTELLIGENCE IS FORMALLY INTRODUCED AS A FIELD OF STUDY

Dartmouth Hall Commemorative Plaque

WOW… YOU MADE IT THIS FAR!

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What if you could explain Artificial Intelligence to your Grandma... and she actually understood it?

In a world filled with AI hype, fear-inducing AI headlines , buzzwords and highly technical AI papers, TEACHING GRANDMA AI cuts through all the noise and explains complex AI topics in an interactive, storytelling format that keeps you glued and eager to learn more.

Through simple, relatable conversations, you'll learn:

- What AI actually is (without the jargons)
- The history of AI and how it evolved into today's powerful tools
- The truth about Machine Learning, Neural Networks, and LLMs
- How Generative AI really works (and how to use it)
- Practical concepts like RAG, AI Agents, and the AI Stack
- The ethical questions everyone should be asking

Whether you're a curious beginner, a developer trying to sharpen your fundamentals, or a professional who knows AI matters but doesn't know where to start, TEACHING GRANDMA AI WAS MADE JUST FOR YOU.

Hayford Ansah is a software engineer and solutions architect who specializes in building scalable systems using AI and cloud technologies. He is a Certified AWS Cloud developer and a Computer Science Graduate from the University Of Ghana.

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