

Pivoting to AI: Turning Career Transition into Innovation

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ABSTRACT

After a recent layoff due to a reorganization, I embraced the opportunity to pivot to a field I am passionate about – Artificial Intelligence. This paper highlights several AI-driven projects completed during this transition, showcasing the potential for AI to enhance processes and increase value.

Featured projects include:

- **AI-Powered Document Search Chatbot:** Leveraging Large Language Models (LLMs) to improve search functionality and document interaction across extensive repositories.
- **Meeting Minute Classifier:** Achieving 98% accuracy in identifying potential audit issues through an AI-based classification model.
- **AI in SharePoint Design:** Enabling non-technical users to contribute through LLM integration, democratizing content creation.
- **Gamifying Training:** Utilizing AI to enhance engagement and retention in training sessions through gamified elements.
- **AI-Driven Meeting Summaries:** Automating the generation of concise and actionable meeting summaries.

I'll also discuss the emotional aspects of career transitions and how networking organizations like PHUSE can play a critical role in turning adversity into opportunities for growth. The goal is to inspire attendees to view career challenges as gateways to innovation and personal reinvention.

INTRODUCTION

Imagine building something you love, helping others, and suddenly having that taken away. That's the crossroads I faced after a layoff. Rather than focusing on loss, I saw an opportunity to rebuild, rekindle passion, and explore AI's potential to innovate within and beyond the pharmaceutical industry.

This period became a journey of personal and professional growth, driven by AI projects and continuous learning. Here, I'll share how these experiences prepared me for my next role in pharma, while fostering a renewed excitement for innovation.

THE AI PROJECTS

PROJECTS AT TAKEDA

While at Takeda, I spearheaded several AI-driven projects (see Table 1) with significant potential impact. Although these initiatives did not reach full implementation before my departure, they exemplify how AI can enhance pharmaceutical operations. Key examples include:

- **Meeting Minute Classifier:** Developed a prototype using natural language processing (NLP) and machine learning to achieve 98% accuracy in identifying potential audit issues. This tool streamlined compliance workflows and optimized resource allocation.
- **AI-Powered Document Search Chatbot:** Designed a chatbot prototype leveraging LLMs to enhance document search functionality. Inspired by the LangChain Chat with Your Data course, it enabled users to access key information with ease.
- **AI in SharePoint Design:** Explored using Copilot to enable non-technical users to create SharePoint pages. IT restrictions led to a pivot where I leveraged LLMs to assist in designing layouts and content.
- **Gamifying Training:** Conceptualized an AI-powered platform to transform corporate learning into interactive experiences. The platform identified knowledge gaps and provided real-time feedback.

- **AI-Driven Meeting Summaries:** Developed a prototype automating the creation of concise and actionable meeting summaries, reducing time spent on follow-ups.

Table 1

Projects at Takeda Including Benefits and Types of AI Used

Project	Benefits	Type of AI Used
Meeting Minute Classifier	Enhanced Compliance Increased Accuracy Increased Efficiency Scalability Insights and Trends Resource Optimization	Natural Language Processing (NLP) Machine Learning (ML) Deep Learning Sentiment Analysis Semantic Analysis
AI-Powered Document Search Chatbot	Enhance Accessibility Increased Efficiency Improved User Experience Contextual Understanding Advanced Search Capabilities Integration and Scalability Knowledge Gap Identification Real-Time Updates	Natural Language Processing (NLP) Machine Learning (ML) Deep Learning Conversational AI Retrieval-Augmented Generation (RAG)
AI in SharePoint Design	Simplified Page Creation Time Savings Enhanced Design Increased Productivity	Natural Language Processing (NLP) Machine Learning (ML) Deep Learning Generative AI
Gamifying Training	Increased Engagement Improved Knowledge Retention Higher Motivation Better Learning Outcomes Scalability	Natural Language Processing (NLP) Machine Learning (ML) Generative AI Sentiment Analysis
Ai-Driven Meeting Summaries	Time Savings Enhanced Accuracy Improved Productivity Accessibility Scalability	Natural Language Processing (NLP) Machine Learning (ML) Deep Learning Generative AI Sentiment and Emotion Analysis

LIFE MOVES FAST – KEEP LEARNING

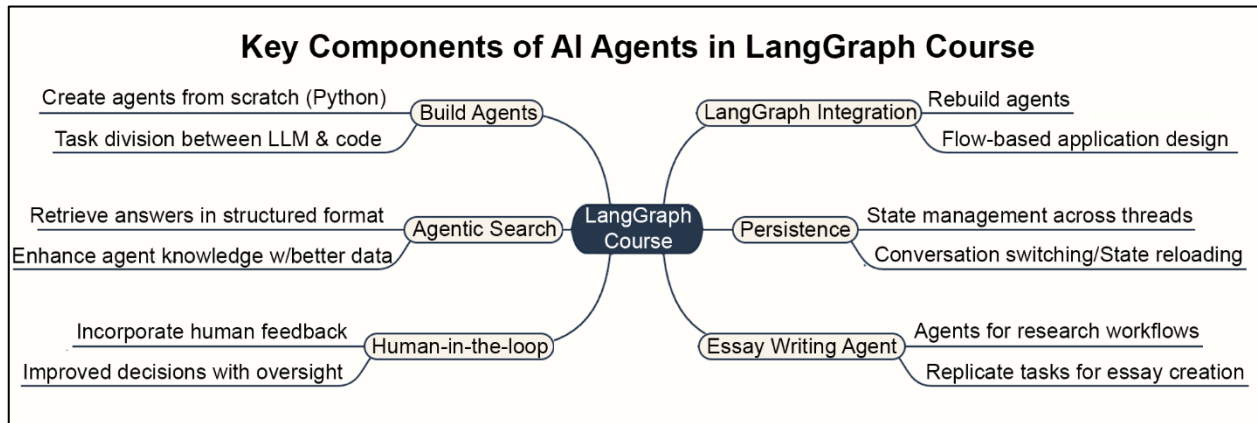
“The single most important thing to understand about AI is how fast it is moving.” – Dario Amodei

Continuous learning has been pivotal during this transition. Platforms like Coursera and LinkedIn Learning provided tools to deepen my expertise. Key certifications include:

- **Deep Learning Specialization:** This specialization equipped me to design neural networks, optimize architectures, and apply them to real-world problems. These skills directly supported the Meeting Minute Classifier and the Predator-Prey Simulation projects.
- **LangChain Chat with Your Data:** This course enabled me to build chatbots capable of interacting with diverse datasets, foundational to the AI-Powered Document Search Chatbot and AI-driven enhancements for board games.
- **AI Agents in LangGraph** (see Figure 1): Focused on creating autonomous agents capable of decision-making and interacting with data in real-time, this course influenced the development of AI-powered assistants for tabletop games.

Figure 1

Coursera Course Example: Key Components of AI Agents in LangGraph Course



Note. This figure highlights the key concepts and activities covered in the AI Agents in LangGraph Course available on Coursera.

While technical proficiency is essential, it is crucial not to overlook the importance of soft skills. Research shows that 85% of job success comes from well-developed soft skills, with only 15% attributed to technical knowledge. For example,

- **AI Ethics in Business:** Understand ethical AI practices to help ensure responsible design choices and limitations.
- **Leading People and Teams:** Strengthen your ability to collaborate effectively and lead project teams.

No longer working for Takeda, I found it essential to create a space where I could apply these learnings in real-world scenarios. This led to the foundation of Good Gorilla, which became a creative outlet to explore innovative applications of AI.

ROLLING THE DICE – MORE AI PROJECTS

PROJECTS AT GOOD GORILLA

Founding Good Gorilla allowed me to merge modern technology with classic gaming mechanics, creating engaging experiences while applying AI in innovative ways. Each project served as a practical application of skills I developed through continuous learning. Projects include:

- **Genome Giants: Dinosaur Edition:** Compete to build the best set of genetically engineered dinosaurs.
- **The Pharma Frontier “Boldly Creating Cures Where None Have Gone Before”:** Create the most successful pharmaceutical company by mastering the drug development process.
- **Tabletop Agents:** Creating AI-powered assistants for tabletop gameplay to enhance player experiences.
- **AI-Powered Board Game Enhancements:** Enhancing gameplay with AI-driven apps to balance modern technology with traditional gameplay and increase engagement.
- **Primal Patterns: Ecosystem AI:** Reviving and enhancing a genetic programming project from my master’s degree to model ecosystems, incorporating modern AI techniques for more complex interactions.

Good Gorilla provided a creative outlet to hone my AI expertise, ensuring my skills remained sharp while also exploring new applications in an area I’m passionate about. These projects highlight the versatility of AI and its potential for innovation beyond traditional settings.

EMOTIONAL JOURNEY AND PRACTICAL STRATEGIES

40% of Americans have been laid off or terminated from a job at least once.

A SHARED EXPERIENCE AND EMOTIONAL CHALLENGES

Career transitions are not uncommon. While I felt fortunate that my skills and background positioned me well for future opportunities, navigating this transition came with its share of emotional challenges:

- **Feeling like I had failed or wasn't good enough:** A layoff can bring self-doubt and questions about one's worth.
- **Job applications as a black hole:** Sending out applications and hearing nothing back can be frustrating and demoralizing.
- **Uncertainty about finding a new job:** The unknown is always stressful, particularly when you're navigating a competitive job market.
- **Taking rejections personally:** It's hard not to feel a personal sting when opportunities don't pan out.

Hearing the stories of others who faced even greater challenges helped me maintain perspective and reinforced my gratitude for the support systems and opportunities I had access to during this time. These shared experiences reminded me that challenges like these are part of many professional journeys, offering both comfort and a broader perspective on resilience.

PRACTICAL STRATEGIES FOR RESILIENCE

To overcome these challenges, I focused on strategies that helped me stay grounded and motivated:

- **Maintain a Resilient Mindset:** I reminded myself that it's human nature to imagine the worst-case scenario, but reality is often far better. Flexibility became key as I adapted to new circumstances, embraced change, and sought opportunities.
- **Lean on Family, Friends, and Community:** Maintaining close relationships reminded me I wasn't navigating this journey alone.
- **Work on Exciting Projects:** Good Gorilla gave me purpose and kept me engaged with work I find meaningful.
- **Physical and Mental Well-Being:** Staying active has improved my physical health, boosted my mood, and reduced stress. Walking my dog became a daily ritual that provided exercise, mental clarity, and a chance to reconnect with nature.
- **Take Small Steps:** Approaching tasks like eating an elephant, one bite at a time, helped me stay productive without feeling overwhelmed.

Building resilience through these strategies prepared me to fully leverage the professional opportunities that networking has to offer.

NETWORKING

70% of all jobs are not publicly advertised, and up to 80% of positions are filled through networking.

LEVERAGING PHUSE

Several trusted colleagues and friends recommended PHUSE as a valuable networking and learning opportunity, which encouraged me to explore it further and as I prepare for my first PHUSE conference, I have already experienced the value of its educational tools and resources. PHUSE provides an extensive library of white papers, webinars, and training sessions on topics such as AI in clinical trials, regulatory updates, and statistical programming. The organization also facilitates forums to explore emerging trends in AI and data science, offering invaluable exposure to diverse industry perspectives.

LEVERAGING LINKEDIN

While LinkedIn has been a key resource during career changes, I have come to appreciate the importance of nurturing those connections continuously, not just when seeking opportunities. LinkedIn has also been invaluable for making new connections, reaching out to existing ones, and obtaining recommendations. It has allowed me to stay current on developments in my field, explore related industries, and research companies and roles, making it a critical tool in my professional journey.

COMMUNITY: A FOUNDATION FOR SUPPORT

During times of transition, leaning on friends, family, and colleagues has been invaluable. My support network has taught me the value of staying engaged, sharing progress, celebrating successes, and offering encouragement to others. Through active collaboration and regular interactions, I have come to see how building a strong community

helps foster innovation and resilience. These connections have not only provided emotional support during transitions but also opened doors to new opportunities and perspectives that have enriched my professional and personal growth.

CONCLUSION

My transition has been a journey of resilience, growth, and innovation. Challenges have a way of sparking creativity and revealing opportunities that might otherwise be missed. By building new skills, engaging with networks like PHUSE, and pursuing meaningful projects, setbacks can become powerful steppingstones to success.

Working on these AI projects increased my passion for innovation and prepared me for future opportunities. I envision a future where AI drives transformative improvements in pharmaceutical operations by enhancing efficiency, scalability, and ensuring ethical AI practices, all while maintaining a focus on patient-centric outcomes.

Staying motivated and engaged through connections and creative outlets like PHUSE and Good Gorilla has been pivotal during this transition. These platforms have enabled me to refine my skills and put me in a position to contribute to shaping the future of pharma.

The future is bright for those willing to adapt, embrace change, and approach uncertainty as an invitation to innovate and thrive. Life, like a game, throws curve balls. Sometimes you need to strategize, roll the dice, and see where they land. It's not just about winning but enjoying the journey, learning from every move, and creating meaningful experiences along the way.

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