AI Agents – A Pragmatic Approach

From Concept to Implementation

Hands-on workshop by Thomas Gijsels

///AdeptEvents

- **Understanding what AI agents are and how autonomous systems work**
- **Designing scalable AI agent architectures, from RAG solutions to multi-agent systems**
- **Selecting suitable language models tailored to use cases**
- **Integrating AI Agents with business data, tools and APIs**
- **Managing and monitoring AI Agents - governance and security**
- **Roadmap for successful deployment with integration into existing applications**
- **You build your own AI Agent with an easy-to-use low-code tool**

LANGUAGE
English or Dutch

VENUE
Utrecht

TIME
9:00 – 17:00 hours

REGISTRATION
www.adeptevents.nl

AI Agents – A Pragmatic Approach

From Concept to Implementation

We are in the midst of a fundamental technological shift. While conversational AI like ChatGPT opened the door, the next, more powerful evolution is already here: AI Agents. These are no longer passive chatbots waiting for a prompt; they are autonomous systems integrated into the modern workplace, capable of executing complex tasks and managing entire workflows independently.
The question is no longer if AI Agents will change the business world, but how fast your organization can successfully integrate these new digital employees. This workshop gives you the strategic and practical answer.

Productivity and Impact

Organizations are moving past manual bottlenecks. HR is no longer bogged down by repetitive inquiries, and Finance has moved beyond hours of manual data aggregation. Data professionals are breaking free from the cycle of repetitive SQL queries and manual data cleaning just to keep dashboards alive, while operations and IT teams have automated shipment tracking and employee onboarding. Your workday remains eight hours, but your productivity and impact grow exponentially. They enable you to:

- **Work more strategically:** Focus on high-value tasks while AI Agents handle routine processes.
- **Improve collaboration:** Use AI Agents as an interface for quick access to process information or customer data.
- **Accelerate innovation:** Integrate AI Agents into your business architecture to streamline workflows and unlock new possibilities.

With the right configuration and context, AI Agents deliver not just efficiency, but also a consistent, high-quality contribution to your organization. The rise of advanced language models, such as the technology behind ChatGPT, was just the beginning. AI Agents go further by combining these language models with external data sources, memory functionality, and workflow logic.

LEARNING OBJECTIVES

AI Agents promise a revolution in efficiency, but the step from a promising experiment to a secure, scalable, and fully integrated enterprise solution is a massive challenge. How do you ensure your agents perform reliably with complex business data? How do you guarantee security and governance? And how do you integrate these systems seamlessly with your existing processes and IT infrastructure? This workshop is designed to bridge that gap. We go beyond theory and give you the hands-on knowledge to tackle these challenges. You will learn, among other things:

- **Defining AI Agents:** You will learn the core concepts, from autonomous systems that perceive and act to the technology and mechanisms behind the brains of the Agents: the Large Language Models (LLMs).
- **Setting Up the Right Architecture:** You will learn how to design the technical blueprint of an agent, from a simple Retrieval-Augmented Generation (RAG) pipeline to complex multi-agent systems with memory and planning.
- **Choosing the Perfect Model:** You will learn to weigh the trade-offs between powerful LLMs for generic tasks and smaller, domain-specific models for specific use cases.
- **The Data Foundation for Autonomy:** Learn how to transform your existing data into a reliable "source of truth," ensuring that your integration pipelines and data quality standards are optimized to prevent hallucinations and drive accurate agent performance.

- **Bridging Data and Intelligence:** How to architect your data streams for AI readiness, moving beyond simple storage to creating structured, high-quality integrations that allow agents to access and reason with your business data effectively.
- **Training Agents Effectively:** You will learn the process of data preparation and setting up annotation workflows to feed your model with high-quality, relevant business data.
- **Integrating Tool Interaction:** How to make an agent action-oriented by linking it to external tools and APIs so it can execute tasks within your existing systems.
- **Model Maintenance and Management:** You will learn how to keep your agent's performance up to par through re-training with new data and drift detection to prevent quality loss.
- **Designing Concrete Business Scenarios:** You will learn to translate theory into practice by developing scenarios where agents support processes, prepare decisions, and report automatically.
- **Controlling Costs:** You will get concrete tools for managing budgets by choosing cost-efficient models, optimizing cloud resources, and applying prompt engineering to minimize token usage.
- **Ensuring Human Control:** How to implement human-in-the-loop systems for supervision on decisions and setting up feedback loops for continuous improvement.
- **Successful Deployment:** You will learn the roadmap to technically take an AI agent live, from cloud hosting via various providers to seamless integration into your existing business applications.

Hands-on: During the workshop, you will build various AI Agents in a low-code tool, ranging from a simple Agent to a Multi-Agent Architecture with complex memory and tool usage—and then go home with working prototypes.

Who is it for?

IT & Enterprise Architects, BI and Data-Professionals, Data Architects, Functional & Business Analysts, Digital Transformation Officers, Change Managers, Innovation Officers. No technical background or software development skills are required to participate on this course.

Language: this course is delivered in English unless we have an all-Dutch group.

THOMAS GIJSELS

Thomas Gijsels is Chief Operating Officer (COO) at Evident Capital, where he leads the strategic integration of AI technologies across all the organization's operational processes. His work involves optimizing processes and systems through AI-driven automation, agents, and models, leading to greater efficiency, advanced data-driven decision-making, and optimized resource allocation across all business domains.

With his background as a functional analyst, he possesses deep knowledge of how agents can be effectively deployed in organizations and diverse business contexts, from process automation to decision-making. As Co-Chair of the AI & Big Data Committee of the Hong Kong Fintech Association, Thomas plays a key role in promoting AI-driven innovations within the fintech sector.

His broad knowledge of AI applications, combined with actual implementation and experience scaling these technologies, makes him the ideal assistant to lead you in deploying AI Agents in your organization.

Detailed Course Outline

Block 1: Fundamentals within AI

We start by laying a solid foundation. What is AI really? How do language models think? What are neural networks? And what is the difference between GPT and domain-specific models? You will gain insight into how AI learns, decides, and generalizes—without having to write a single line of code.

- The Brain of AI Agents: Overview of artificial intelligence, machine learning, and deep learning.
- Different types of networks: Neural networks, convolutional networks (CNN), others. How a neural network works: basic principles of layers, weights, activation functions.
- Different types of models: LLMs (such as GPT, LLAMA, or Grok), Open-Source/On-Premise/Proprietary models, as well as smaller domain-specific models.

Block 2: Training AI Agent Models

AI is only as smart as the data you feed it. In this section, you will discover via specific use cases how models are trained, how you assess quality, and where things often go wrong.

- Data: Pre-processing and annotation workflows.
- Training: Best practices, data augmentation, hyperparameter tuning, preventing overfitting.
- Fine-tuning: Adapting pre-trained models for specific tasks.
- Benchmarks & Security: How do you measure quality, how do you adjust? Prompt injections and protection mechanisms.
- Hardware: Role of GPUs, and Cloud Providers.
- Deployment: Local, cloud-based.
- Maintenance: Re-training, monitoring, drift detection, and performance evaluation.

Block 3: From Model to full-fledged Agent

In this section, we make the leap to a full agent. You will discover how to build an AI Agent that doesn't just provide answers, but also acts—integrated into your tools and workflows. We look at all components individually: from memory architecture to the use of tools, triggers, and complex multi-agent architectures.

- What is an AI Agent? Difference from traditional chatbots and models. Architectures of agents: simple agents vs. multi-agent models.
- Tools: Integration and technical operation for agents (tool schema, MCP Server/Clients, A2A Protocol...).
- Memory: Complex memory architectures including short-term memory, semantic memory, agentic Retrieval-Augmented Generation (RAG)...
- Human-in-the-loop: Collaboration between human and machine within an evaluation context. Development Platforms and Frameworks: Google Vertex AI, AWS Bedrock, LangChain, LangGraph...
- AI Agent Evaluations: LLM-as-a-judge, code-based evaluations, human-in-the-loop evaluations...

Block 4: Build Your Own Agent

Now it gets concrete. You will build several AI Agents yourself—step by step, guided by the instructor. You will work in a low/no-code environment, define instruction profiles, add memory, and let your Agent communicate with tools. At the end of this block, you will have the knowledge, as well as working prototypes that you can test immediately in your reality.

- Guided trajectory in which you develop an AI Agent yourself step by step.
- User-friendly low/no-code environment.
- Working with memory, context retention, and agent instruction profiles.
- Connection to external data, tools, and databases.

Block 5: Q&A

We will allow ample time to answer all your questions relating to the workshop.

Please bring with you:

1. Your own laptop (and power adapter) and enabled Wifi
2. Unrestricted access to the free web application https://n8n.io/ (please check whether you have access rights beforehand)
3. Be sure to check your Wifi and verify that you have access to the n8n.io platform.

Information

DATE AND TIME

The workshop will take place once or twice a year with the exact date and time available on our website. The programme starts at 9:00 am and ends at 17:00 on both days. Registration commences at 8:30 am and we recommend that you arrive early.

VENUE

Adept Events works with several venues in and near Amersfoort and Utrecht. We strive to provide you with the location details as soon as possible. The exact venue will be on our website and in the confirmation e-mail that you will receive one week prior to the event. Always check our website prior to your departure to ensure you have the exact location and directions.

HOW TO REGISTER

Please register online at **www.adeptevents.nl**. For registering by print, please scan the completed registration form and send this or your Purchase Order to **customerservice@adeptevents.nl**. We will confirm your registration and invoice your company by e-mail therefore please do not omit your e-mail address when registering.
In completing your registration form you declare that you agree with our **Terms and Conditions**.

REGISTRATION FEE & DISCOUNTS

Please find the registration fee and Early Bird discount terms **on this page** on our website. Discounts are also available for group bookings of two or more delegates representing the same organization made at the same time. Ten percent off for the second and third delegate and fifteen percent off for all delegates when registering four or more delegates (all delegates must be listed on the same invoice).
This cannot be used in conjunction with other discounts.

All prices are VAT excluded.

PAYMENT

Full payment is due prior to the workshop. An invoice will be sent to you containing our full bank details including BIC and IBAN. Your payment should always include the invoice number as well as the name of your company and the delegate name.

Payment by credit card is also available. Please mention this in the Comment-field upon registration and find further instructions for credit card payment on our **customer service page**.

Cancellation Policy

Cancellations must be received in writing at least three weeks before the commencement of the workshop and will be subject to a € 75,- administration fee. It is regretted that cancellations received within three weeks of the workshop date will be liable for the full workshop fee. Substitutions can be made at any time and at no extra charge.

Cancellation Liability
In the unlikely event of cancellation of the workshop for any reason, Adept Events' liability is limited to the return of the registration fee only. Adept Events will not reimburse delegates for any travel or hotel cancellation fees or penalties. It may be necessary, for reasons beyond the control of Adept Events, to change the content, timings, speakers, date and venue of the workshop.

MORE INFORMATION

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