

This is the Jalgos Playbook

Dive into our

A.I.-Native Company.

This playbook offers an overview of how we conduct great AI innovation projects and how we run our company.

This document is for everyone to read, from clients to future hires or anyone interested in how to work with AI the Jalgos way.

Choose a topic and dive into our world of data, algorithms and innovation.

A big thanks to our partners at [French Bureau](#) for inspiring this Playbook!

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Introducing: Jalgos

Our Mission

We are an **AI & data studio dedicated to innovation** for large corporations, startups, governments and organisations.

We are a team of high-end experts in AI, data, and strategy. Thanks to both our entrepreneurial and researcher mindset we **bridge the gap between R&D and business** to make you benefit from the tremendous opportunities offered by AI, in a fast and reliable way.

Our mission is to bring AI and data-powered strategy to our clients to place them at the forefront of innovation in their sector.

Advocates for Good A.I.

As algorithm specialists, we are striving for good AI and we contribute our best to building it.

In our day to day work with our clients and partners, we take pride in:

- scientific rigor, not algorithmic hacking;
- creating real business values for customers, employees and business owners;
- thinking for the long term, on reliability, and continuous innovation;
- evangelising about the opportunities and consequences of AI.

Alongside our client work, we design and develop our own research and AI products to solve the most interesting questions we find.

What we do

Our goal is to **leverage cutting-edge AI research to solve real-world problems for our clients**, bringing algorithmic solutions and data awareness to organisations.

We fulfill this mission through 3 main activities:

- The “**Workshop**” is where the deep work happens, where we thoroughly analyse data for our clients, build and adapt algorithms, design dashboards and visualisations and store our products until we find new opportunities for them to bring value to organisations. Projects are typically a few months in duration, at the end of which we deliver a working prototype and full documentation.
- The “**Strategic Office**” is dedicated to advising, auditing and training our clients. We work on data and AI strategy, and we provide general, data-powered strategic consulting. We also create high-level content that we publish and push towards governments and organisations in order to promote our convictions on AI and its consequences.
- The “**Studio**” - This is an AI-powered startup launcher dedicated to exploring new market opportunities for our technologies and expertise, to test, create and accelerate new businesses with our partners.

The value we add

The core value we bring you is to **bridge the gap between two worlds: AI research and innovation on one hand, and business strategy, growth and development on the other.**

Jalgos’ *raison d’être* is the belief that by bringing algorithmic mastery to business, we can generate high impact innovation with a strong ROI in short time spans.

How we do it

We develop, refine and are constantly testing sound methodologies for rapidly transforming AI research into efficient and durable algorithmic products. The whole process, from strategic consulting and exploration to a working product, typically takes 4 to 8 months, depending on the complexity of the data and the problem at hand.

Data strategy

We are convinced that AI will become critical to virtually all business sectors in the coming years. At the same time successful AI projects or large-scale AI transitions have to reflect each company's culture, business, and value proposition. Not the other way around - even as algorithms bring deep changes in organisations and value creation.

- We help you **define the most relevant strategy** for embracing AI and data in your business, both short and long term.
- We **audit** your current **data strategy, architecture and processes** and recommend the best way to level up.
- We **identify all the data sources** inside your systems, outside your systems, data creation, gathering and collection opportunities.
- We **design, plan and price the most efficient course of action** to make the best out of AI technologies.

Our hybrid backgrounds, as both accomplished data scientists and seasoned consultants, will bring you the best of both worlds.

Transplanting algorithms

This is the core of what AI innovation is about, and we know how to do it best.

Phase 1 - Explore

This is where it all starts, always.

Data exploration is as much about data science as it is about understanding the field of application of the nascent algorithm. Along with data cleaning, we interact with the data through using our methods and toolbox, and with subject matter experts, using precise documentation and clear visualisation.

The output of going back and forth between signal and interpretation leads to finding key actionable insights and reaching a deep understanding of the internal structure of the data and the useful information it contains.

It is this information that will be automatically detected and harnessed by the final algorithm.

Phase 2 - Adapt

Once signal is extracted from the data, we go to our algorithmic shelves to find the most relevant algorithm to deploy on the data, and solve the problem at hand, whether it is about prediction, optimisation, matching, identification, etc.

After a period of testing and improvement, the prototype's internal motor is ready.

Phase 3 - Productify

This phase is about enabling the algorithm to interact with our clients' teams, and with our clients' data. It is all about UX design, data visualisation, and data management.

Our designers work hand-in-hand with our clients to define the perfect interface, and give direct, visual access to the algorithm's output and underlying data. Our data engineers make interaction with the database and the system seamless - be it through deployment to our clients' environment or hosted on our platform.

What we care about

- **Authenticity & rigor:** We are experts who know business, and we take pride in creating sound solutions that bring the most value to our clients.
- **Design:** Our algorithms, documentation and solutions come with great UX design and visualisations, to make interactions natural and information clear and direct.
- **Transparency:** Our no-black-box policy is not just about giving you information about what happens in our products, it is also about absolute efficiency, scientific excellence and long term reliability. We provide you with detailed documentation of what we do and how we do it, to enable you to properly interpret our algorithms' output.
- **Skill transfer:** Acculturation and what we call a data mindset are key for an algorithm's real world success. Such adaptation takes time, this is why we work on it from the very start, and dedicate time for skill transfer to our clients' teams all along the way.
- **Long term:** We think and build our products keeping in mind that they will have to evolve, and serve as the foundation of future products and services. We care for long term reliability and adaptability as much as we care about quick prototyping.

Deliverables

Many things happen during the course of a full 4 to 8 months mission, and we give our client as much information about these as possible.

From a business problem to a working algorithmic solution, we deliver a lot along the way, to create value early on and prepare for integrating our solution to our clients' teams from the kick-off.

- **Strategy and architecture:** We deliver comprehensive and well-designed reports from start to finish. We present our strategic and technical recommendations to our clients, as well as the findings, goals, and thought processes that lead us there. All our reports are well-designed and illustrated in order to convey our ideas and technical specifications in an easy-to-understand way.

- **Technical, readable documentation:** The path that starts with data exploration and culminates in a working prototype is extremely rich in key insights, findings, new ideas emerging from the data, but also hypotheses, trials, and technical choices. Gathering all this in well designed comprehensive reports not only has tremendous value for our clients, it is also a requirement for long term success in data transformation, and one of the ways we demonstrate our attention to detail.
- **Interactive dashboards:** Thanks to our designers, we transform data into intuitive visualisations, and results into clear interactive dashboards. We co-construct our dashboards and visualisations with our clients to give them direct contact with data and a flawless UX to interact with our algorithms.
- **The prototype:** The product itself. Functional, adapted to your constraints and goals, we can host it on our servers or help your IT team integrate it in your own environment. We also provide you with a technical and functional documentation to fully empower your use of it.
- **Skill and knowledge transfer:** In addition to pure quality of the product and documentation, we know for a fact that acculturation, skill and knowledge transfers are critical success factors for data and AI projects or transitions. From the very start of our missions, we dedicate ourselves to prepare our clients' teams to integrate the future algorithm and to acquire a data and AI mindset. In addition to our frequent and comprehensive documentation, this is done through regular meetings and in-depth exchanges about the budding tool.

Training

What your business needs, even more than data scientists, is managers with a sound insight into data and algorithm related questions. They must be able to interact with data science teams while keeping a high level view on strategy and business.

With all the humility required in perpetually evolving fields in, we train C-suite members, managers and consultants to the principles of AI, data science and modelling. We provide the tools that allow them to integrate the opportunities offered by data and AI in their strategic

thinking, as well as to manage, challenge and interact efficiently with technical teams. Our training programmes are designed to be accessible to non-specialists.

We have also built extensive technical training, that we offer internally for the onboarding of new recruits.

What we expect from our clients

Our methodology for innovation in AI and data grants us great autonomy. We work from our own offices, on our machines, and the minimal involvement we expect from our clients is the following:

- Gather the stakeholders inside the organisation and through a written discussion thread, in order to make communication easy and transparent
- Read the weekly or bimonthly documentation we provide, and attend conference calls the day after in order to exchange information and feedback.

This is the bare minimum that we expect even from very busy clients. For more involved ones, we welcome clients to our offices on a regular basis to dive deeper into our methodology and participate actively in our working sessions.

The Jalgos way

Our AI innovation method takes its inspiration from many academic, entrepreneurial, industrial and personal sources. Among the key ideas that support the Jalgos way, here are the most important to us:

- **Model thinking:** Models are the basis of all scientific analysis and innovation, whether powered by data or not. It is the fundamental way we can make sense of the world and frame discussions. Using model thinking as exposed for example by Scott E. Page enables us to quickly dive into complex fields previously unknown to us. Without becoming specialists, it allows us to rapidly bring sound innovation through algorithms.
- **Rapid prototyping:** Very early in the process, we start sketching the UX and designing the internal logic of the prototype we will build using AI algorithms. This allows us to

precisely understand the needs and constraints of the future final users of the product, while we dig deeply into the data and the precious information it holds. This makes our innovation process fast and reliable.

- **Scientific rigor:** The need to go fast and the appeal of out-of-the-box algorithms makes algorithmic hacking over proper R&D tempting for some, but not us. We created Jalgos with the strong belief that data science and AI innovation requires, even more than other fields, highly rigorous scientific methodology in order to create durable and powerful innovation. Not “wow factor” hacks that will disappoint or backfire in the mid-term. We all have strong scientific backgrounds, centred on modelling, and we apply this rigor to our development, analyses and innovation in order to serve our clients best in the short and long term.
- **Unwavering optimism:** Boldness and optimism are at the core of a successful innovator’s attitude. We love what we do, and we make it a point to pass our enthusiasm and passion on to our clients’ teams.

Our ever-evolving toolbox

We dedicate at least 30% of our time to designing and developing algorithmic libraries and bricks with which we can build fast and sound solutions. The outputs of all this fundamental AI R&D work, started years ago, is our evolving toolbox, that covers a wide range of applications, from parallel and distributed computing to algebraic operations. We pick the most relevant bricks and algorithmic engines on our shelves for each application, and adapt them so they fit perfectly to the constraints. Thanks to this ongoing work, we can offer both fast and cutting edge algorithmic products to our clients.

As we embrace the open source model of part of our work, we want to give back and are opening parts of our toolbox to the community.

Our views on AI and its impact

We do not limit our activity to developing tomorrow's algorithms and putting them in the hands of our clients. We are also very conscious of and passionate about the deep consequences that our field will have on many aspect of our lives. We dedicate time and effort to refine our own views on the issue, and to share them in conferences, articles, or through awareness sessions. The topic is endless and algorithms are expected to impact every aspect of our lives - they already do in many ways - so we have selected a few areas where we find that the challenges particularly compelling.

AI & ethics

Free will and the right to privacy are just two aspects of who we are that are being deeply influenced by algorithms, and are expected to be threatened if we do not properly anticipate the consequences of what we do with AI.

Furthermore, extensive delegation of decisions, including life and death ones, and the creation of illusions of empathy and sensitivity in machines raises questions about our identity and what should and shouldn't be done. We are convinced these questions should be studied deeply and shared in public forums as early as today. This is critical for building the good AI and future we aspire to.

AI & society

The growing impact of algorithms on the job market ought to be anticipated properly in order to manage it up front.

Furthermore, the way algorithms already influence how we consume information, and thus how we think and vote, needs an in-depth analysis in order to address the negative consequences of their involvement. We are actually building a set of tools internally that aim at fighting the cognitive bias caused by recommendation engines, and more generally at enriching the way we read and get informed online.

Finally, algorithms open interesting opportunities, to refine the way we think about state, politics and social norms, along with risks. We encourage and advise public figures to dive into these questions in order to make the most and the best out of these innovations.

AI & organisations

Algorithms are all about detecting, managing, harnessing and communicating information in order to enable the people that constitute them to accomplish their mission. This is exactly what organisations are also about. The coming of AI is already having an important impact on internal processes, in addition to the expected replacement of some of today's jobs. These questions are crucial for all types of organisations, and we are convinced they should be addressed seriously without delay, which is why we raise awareness and advise organisations on the matter.

How to work with us

First contact

First contact is all about deciding if we are both enthusiastic about working together on data and AI innovation projects. We've defined - and are constantly refining - our offering so that it is most valuable for our clients, by taking the best of both R&D and consulting. We do not try to sell a single one size-fits-all product. And we do not stop at proofs-of-concept. We always start by presenting the way we work and why we are convinced of its value, so you know what to expect from working with us.

At this early stage, we will identify with you the main processes and opportunities related to data and algorithms in within your business. We will articulate the business question(s) and technical challenges, and our proposition to solve them.

Data security & confidentiality

Security is our primary concern when it comes to data and information in general. Our highly secured data setup has successfully passed an in-depth audit for hosting data with military grade and national interest confidentiality requirements. We take pride in continuing to exceed security requirements. In addition to data protection and security, secrecy is also deeply rooted in the way we interact inside the company itself. Access to information and data is defined on a case by case, need-to-know basis, and we stringently keep track of it.

Intellectual property

Everything that is produced during the mission belongs *de facto* to our clients. When a project consists in adapting one of our existing products, an IP transfer or other agreement is defined between us and the client after a trial phase.

Once a prototype or full product is delivered, the client may choose to:

- **Keep the IP** for himself to continue the project internally or just use the product as is
- **Transfer us the IP** in exchange for a share in a startup launched through our **Studio**

Billing

Our billing model is pretty simple:

For projects shorter than two months we bill 50% at the beginning of the assignment and 50% when we deliver the final result. For work longer than two months, we bill 30% at the beginning, 30% in the middle, and 40% at the end.

We'll expect you to pay us promptly, cashflow is key for startups!

What it's like to work with us

The Jalgos spirit

Innovator mindset

An innovator mindset is a subtle mix of strong **optimism** and enthusiasm, **humility**, intellectual **honesty**, **directness**, and **imagination**. We foster all of these within our team and the way we interact.

We encourage kind and straightforward communication, respectfully and without ambiguity. Thus we expect everybody to challenge anybody, without being hindered by hierarchy. And to always communicate keeping in mind our shared goals, discovering new ways to solve big problems with our minds and tools.

Team work

Jalgos is first and foremost about building and nurturing a team of passionate people that enjoy working and spending time together, to create the very best in AI innovation. We foster teamwork; working alone on a project is a no go with us. We know it is more efficient and more fun to exchange ideas and share progress and questions with partners. We also set aside time for our AI retreats, during which we leave our day-to-day lives to spend up to a week in a nice destination, work on a prototype of ours and have fun. Our last outing was in Greece!

Technological agnosticism

While many people stick to talking about database technologies and languages when they discuss data and AI, we consider the diversity of technologies available as an evolving toolbox from which we can pick the best. That being said, we have our favorites, and most of the time we develop in R and C++, and usually use MongoDB for our database needs. But we also use Python, Javascript, Java, Scala, or any other language or database technology when needed. We're polyglot, we just learn what's appropriate when it's relevant.

How, when, and where we work

Our typical working day is from 9am to 7pm and these times are a guide for when we may schedule meetings. But each team member can structure their day in the way that best suits them, as long as it is compatible with teamwork. Even if the workload is heavier on occasions, workdays should not be consistently longer than this, or we would take it as a sign a problem to be resolved. We care for work done and managing maintaining stamina, not time spent working.

Being in the same location when working together is something that is both efficient and fun. It's our preferred setup, and what we expect when we welcome you to the team. That being said, we are flexible concerning remote work, and after the onboarding phase is passed, anyone can work remotely when needed.

The sandbox

Our tools of choice

We don't have fixed beliefs about the best tool, the best algorithm, or the best technology. It just does not work that way. That being said, there are a few internal tools we love and that help us stay efficient and nimble.

- **Slack:** It's our favorite internal tool; basically all internal communication flows through our channels. All our communicating are on Slack in a dedicated channel for each topic, integrated with other tools such as Gitlab, in order to be able to follow and keep track of everyone's work and progress. These habits are also what enables us to work remotely sometimes, with almost no loss of efficiency.
- **Gitlab:** Git is a no-brainer when it comes to handling coding projects, and that's what we do all the time. We set up a Gitlab instance on our servers and every line of code that is ever written gets into it.
- **R with data.table:** While we quite often use other languages and many other libraries, R and data.table work as the very basis of our analytics build up. It's fast, well

implemented, and the syntax is close to our mathematicians' way of thinking about data. What else would we want? Distributed data.table? We built it.

- **Shiny, Rmarkdown & ggplot2:** They are our basic go-to solutions when it comes to presenting results, documenting what we do, and building interactive interfaces. The freedom, simplicity and speed these solutions offer are what we need to have amazing design quickly, even if we also go for other tools when relevant.
- **Google Drive:** For everything that's about sharing information and documents, we use google drive for its simplicity.
- **GMail:** We limit the use of email to external communication, so that our inboxes stay nice. Slack takes care of the rest.
- **Our loyal supercomputers:** Last but not least, we need our powerful servers to run our computations in reasonable time. They are hosted by OVH, our provider of choice when it comes to reliability, security, and quality of service.

Building AI startups of our own

When we are not working on client missions, we build our own algorithms to solve the problems we care about.

Any team member can choose an idea she wants to realise, and form a team to work on it.

New Hires

The Jalgos type

We only look for the best: smart, insightful, self-starters, passionate and generous team players.

Hiring process

The hiring process starts with a short conversation by phone - or a physical meeting if you're around - with two of us. If it fits, the real process starts and you'll be invited to meet the founders and be tested more deeply on your technical skills and motivation.

We only hire permanently (CDI) and through an internship that we expect will lead to a contract. We don't see any reason for temporary contracts once trust is established.

Onboarding & continuous learning

Introductory training (for technical hires)

Being hired is just the beginning of what we hope will be a fun and exciting adventure.

- **Technical profiles:** Even if you are a data science specialist or computer scientist, you'll start by going through our dedicated internal training programme alongside with your first assignments. This will make you become operational, and go from someone who knows data science or computer science to someone who can use it relevantly and rigorously Jalgos-style.
- **Business & strategy profiles:** Along with your first assignments, you will also get in-depth non-technical training about data strategy, algorithms, and AI direct from our founders. The training will help you understand precisely what we do, how we do it, and how it can be applied and adapted to solve our clients' challenges.

Continuous learning

Once the onboarding phase is complete, we never stop learning. We organise weekly presentations about a data science subject, where one of us usually presents an interesting mathematical theory or algorithm to the team. We discuss it afterwards and identify if and how it could become part of our stack and projects.

We also maintain a dynamic and kind atmosphere where we encourage everybody to challenge each other and to share the knowledge each has so that the team grows as a whole.

Research project

Each one of us gets a more long-term research and development project when joining the team. In addition to being intellectually exciting, it is also one of the ways we maintain a research-oriented mindset. You are fully responsible of your project, but you're encouraged to share it with team members for discussion. You'll be helped, challenged and managed by our founders.

The main criterion for choosing your research subject is that you find it fun!

Our research mindset and associated projects extend beyond our data scientists, to our computer scientists, designers and business profiles alike.

These projects, in addition to their intrinsic value, are also a very efficient way to have all of us build powerful libraries, clever methodologies and write high-impact articles.

Salary & equity

Our salaries are solely based on level of experience, regardless of field of expertise or any other factor. We make a point of paying our people fairly. We want great people in, so we consider it fair to reward them accordingly.

In addition, variable compensation is distributed every year to the team depending on a collective appreciation of each one's performance.

Every member receives equity in the form of options when joining the team. The amount depends on the risk taken (the age and size of the company when joining) and the position in the company.

Say hi!

Let's bring AI to the world together.

Drop us a message: data@jalgos.com



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