

The professional profile of PhD-holders

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Core business

PHASE 1 Evaluation

I developed this skill by critically comparing my results with values reported in the literature, especially when identical or similar parameters were used. I evaluated whether differences came from assumptions, datasets, methods, or uncertainties, rather than simply accepting published values. I also discussed my interpretations with supervisors and colleagues, exposed my work to feedback, and used this criticism to refine my analysis. This helped me judge both the quality of my own results and the relevance of other contributions.

*Evaluates the value of various documents concerning his field of expertise.
Is able to judge his own results in terms of both quality and added value.
Is willing to expose ideas to a critical audience; takes others' opinions of his work into account.
Is willing to evaluate the work of other contributors and provides reasoned, realistic judgments of others' work.*

PHASE 1 Information management

I developed this skill by systematically reviewing the literature throughout my PhD work, combining searches on arXiv, NASA ADS, Google Scholar, and bibliographic references from key papers. I learned to identify relevant and reliable sources, compare recent results with established work, and organise papers by topic, method, and relevance to my research questions. I also maintained structured notes and reference lists to track the state of the art, follow new developments, and decide when expert input or deeper investigation was needed.

*Knows how to review the state of the art (SOTA) in a scientific topic.
Makes efficient use of information-gathering methods, identifies pertinent resources, particularly bibliographic resources.
Masters web-based research (e.g., bibliographic databases, patent databases)
Knows how to judge the pertinence of information, critique sources and check source reliability.
Designs and implements information-gathering and management systems using suitable technology.
Addresses issues relating to the security and life cycle of data.
Seeks out support from experts in information and data management.*

Personal and relational qualities

PHASE 1 Collaboration

I developed this skill by working with researchers from different universities and adapting to different academic environments, methods, and expectations. I also participated in summer schools, workshops, and scientific meetings, which helped me build a professional network beyond my immediate research group. These experiences taught me how to exchange ideas, identify common interests, understand the limits of collaboration, and maintain productive relationships with colleagues in my field.

*Develops and maintains cooperative networks.
Knows how to build a professional network for his own and the company's benefit.*

*Is considered an authority in his field of expertise.
Is able to envisage his work in a partnership framework; evaluates the benefits and limitations of a partnership and identifies shared and conflicting interests.*

PHASE 1 Commitment

I developed this skill by persevering through the demanding and uncertain parts of Masters and PhD research, including setbacks in analysis, unexpected results, and the routine work required to make progress. My motivation came from the scientific questions behind my project and from improving the quality of my results. When difficulties arose, I learned from mistakes, adjusted my methods, compared my work carefully with the literature, and relied on feedback from supervisors and peers to keep moving forward.

*Recognizes and can clearly identify his sources of motivation.
Is able to sustain his commitment and motivation in the face of setbacks and adversity.
Deals efficiently with the routine aspects of his job.
Strives for excellence; shows determination.
Learns from his mistakes and bounces back from failures.
Relies on the support and assistance of his peers.*

PHASE 1 Balance

I developed this skill by working with several supervisors and collaborators across different universities, which helped me understand my strengths, limits, and areas for improvement. Their guidance and feedback taught me when to work independently and when to seek support. Through research setbacks, literature comparisons, and discussions with colleagues, I learned to place my work in a broader scientific context, communicate it more clearly, and manage pressure while maintaining a healthy balance between professional and personal life.

*Is aware of his aptitudes, knows how to take advantage of them and demonstrate them.
Expresses himself relevantly, confidently and didactically.
Recognizes the limits of his knowledge, skills and expertise, and knows where to find support when needed.
Is able to consider his practices and experience as part of the bigger picture.
Develops his strengths and knows how to correct his weaknesses by seeking the opinion of others.
Is aware of the need to reconcile career and personal life.
Develops mechanisms to cope with pressure and seeks support when needed.*

PHASE 1 Listening and empathy

I developed this skill by studying and working in several countries and academic environments, which exposed me to different cultures, communication styles, and ways of thinking. Working with supervisors, collaborators, and peers from different backgrounds taught me to listen carefully, adapt my explanations, and understand expectations before responding. These experiences helped me become more open to feedback, more attentive to others' needs, and better able to collaborate respectfully with people from different fields and cultures.

*Has the ability to listen in various situations.
Understands the needs and way of thinking of the people he deals with, including those with a different field of expertise, occupation and/or culture.*

Business management and value creation

PHASE 1 Managing change

I developed this skill by adapting to different academic environments, supervisors, and ways of working during my Masters and now PhD. Changes in research direction, unexpected results, and comparisons with the literature required me to adjust my methods and priorities regularly. Studying and working in different countries also helped me become more flexible and open to new approaches. I learned to ask for advice from supervisors, collaborators, and peers when needed, while using new opportunities such as summer schools and collaborations to strengthen

my project and professional development.

*Can adapt his approach and the project organization according to imperatives.
Adapts to changes and opportunities; knows how and where to find advice.*

PHASE 1 Decision-making

I developed this skill by managing three research projects in parallel during my PhD, which required me to make regular decisions about priorities, methods, and next steps. For each project, I had to decide which analyses to pursue, when to revise an approach, and how to compare my results with the literature before drawing conclusions. I also supported discussions with supervisors by presenting clear results, possible interpretations, and alternative scenarios, allowing decisions to be based on evidence rather than assumptions.

*Knows how to make appropriate decisions for each phase of his project.
Assists his line management in making major decisions (e.g., reporting, scenarios)*

PHASE 1 Producing results

I developed this skill by turning research questions into concrete analyses across my three PhD projects. I tested methods, compared the first results with the literature, identified weaknesses, and refined the analysis until the results were reliable and scientifically useful. I also learned to present outcomes in a form suitable for discussion with supervisors and collaborators, and to judge whether the best way to exploit them was through further analysis, conference presentation, or publication.

*Knows how to transform ideas into innovations.
Quickly deploys prototype and test phases; involves internal and external customers in these phases.
Learns the lessons of the initial tests.
Understands the policies and processes involved in publishing and exploiting research outcomes in his entity.
Is able to determine the most appropriate means of exploiting his results (e.g., patent, publication).*

Strategy and Leadership

PHASE 1 Leadership

I developed this skill by helping supervise a Master's student and by contributing to the coordination of work across my PhD projects. This involved explaining scientific ideas clearly, giving constructive feedback, helping define next steps, and supporting progress without taking over the work. I also learned to build trust with collaborators and supervisors by being reliable, transparent, and open to discussion. These experiences helped me mobilize people around shared research goals and strengthen my ability to guide a project.

*Exercises leadership in connection with a project of which he is in charge.
Knows how to be persuasive and enlist support for a project
.Mobilizes skills for a project of which he is not in charge; manages human resources even when people do not officially report to him.
Builds alliances.
Establishes relationships based on trust.*