The professional profile of PhD-holders

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Enginner specialized in physics informed neural networks

I am a PhD student at TU Bergakademie Freiberg and University of Strasbourg with the focus of my study being physics informed neural networks for flow, heat and mass transfer in porous media.

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Core business

PHASE 1 **Skill development**

I have undergone several training courses during my master's and my PhD that enhance my skills in reseach, development and scientific writing. I have utilized these skills during my study to aid with my work and continue to analyse the important techniques needed for my field.

Sets his professional goals to be ambitious yet realistic.
Identifies and develops means to enhance his employability throughout his career; manages his professional development.
Broadens and upgrades his skillset, personal qualities and achievements.
Uses his networks to expand his scope of competence.
Knows how to transfer his expertise to other fields of activity.
Realizes the necessarily international dimension of his career path.
Accepts input from a mentor or coach to benefit his professional development.

PHASE 1 **Evaluation**

I have done several literature surveys on various topics as part of my studies. These activites helped me understand my own results and whether they stand the test of scientific scrutiny.

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**

As a Ph.D. student, I conducted extensive literature reviews to understand the existing research and identify research gaps. By utilizing citation management tools like Zotero or EndNote I am able to organize myreferences, generate citations in various formats, and easily insert them into my research papers.

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

Communication

I have put together several presentations on the topics I currently work on and have presented them to my peers on several occassions.

Knows how to put together a persuasive presentation and communicate about his project or his activity.
Understands, interprets and communicates appropriately in a register suited to his aims and his audience.
Masters a range of communication tools.
Masters his online identity.
Contributes to the dissemination of knowledge within the company, and demonstrates effective teaching skills.
Is proficient in at least English and one other world language.

PHASE 1

Analysis, synthesis and critical thinking

During my work, I have analysed the results of my algorithms and utilized appropriate techniques to verify thier accuracy and reliability. I have implemented my ideas successfully using structured work principles.

Analyzes his own findings and those of his peers.
Is able to synthesize; expresses key ideas clearly.
Can sort and rank information according to the goal.
Pursues his reasoning and hypotheses free of dogmatism or ideological bias.
Has the objectivity to consider various schools of thought; is able to modify his point of view.
Demonstrates intellectual rigor.

PHASE 1

Open-mindedness and creativity

I have implemented ideas not directly related to my work in order to analyse the functioning and limitations of specific techniques.

Demonstrates an ability to acquire knowledge; shows flexibility and open-mindedness. Engages in interdisciplinary activities.
Possesses a constructive style of questioning and scientific doubt.
Develops, takes ownership of and tests new ideas; is clever; seizes opportunities.
Interacts with and seeks the collaboration of professionals of different cultures; knows how to accommodate cultural differences.

Business management and value creation

PHASE 1

Project management

I have, during my master and PhD, undertook several projects, where I developed a clear and detailed plan for my research project, including setting specific golas, breaking them down to smaller tasks and creating a feasible timetable. I prioritized works based on circumstances which optimized my productivity.

Plans projects to meet goals in accordance with strategy and priorities, and taking quality, deadline and budget constraints into account.
Knows how to write specifications.

Is accountable for resources used and for meeting the deadlines and quality requirements of the deliverable.
Reacts efficiently and appropriately to change and unforeseen events.
Conducts his project within a framework of auditing and evaluation, deploying the appropriate systems.

PHASE 1 Managing change

I have adapted to changes that I experienced during my projects based on new information or unexpected developments. I always attempt to stay flexible in order to accomodate any unforseen changes. I regularly review my work to determine whether changes are required and where these changes must be implemented.

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