



# Mario Burbano

CLOUD DATA ENGINEER AND ANALYST · PHD IN COMPUTATIONAL CHEMISTRY

Antony, France

+33 6 43 27 79 22 | [burbanom@tcd.ie](mailto:burbanom@tcd.ie) | [burbanom](#) | [linkedin.com/in/burbanom](https://www.linkedin.com/in/burbanom) | [Iz0GlpIAAAAJ](#)

## FKG Dentaire S.A.

September 23, 2021

LA CHAUX-DE-FONDS  
SWITZERLAND

### R&D Project Manager

Dear Sir or Madam

My educational background is in the physical sciences. Throughout my career as a research scientist I have consistently relied on the power of computers and the data that they generate in order to elucidate the properties of materials for energy storage.

The domain of high performance computing, where I gained the bulk of my professional experience since the beginning of my PhD, relies on the harnessing of computer clusters connected via high speed networks in order to make it possible to perform simulations of large and/or complex systems. My role as a researcher consisted of implementing the algorithms that represent the physical systems in question, namely battery or solar cell materials, while taking into account the distributed nature of the computer cluster architecture. The research process then necessitated that I gather the vast amounts of data that result from the simulations, that I parse them and that I interpret them in the context of their physical/chemical meaning. The final aspect, and crown achievement of this investigative process, is the communication of the results with the research community by way of scientific articles that are written in collaboration with different teams. My published articles can be found on my google scholar page.

The academic world where I crafted my skills, relies heavily on the linux environment, with FORTRAN being the language of choice for the implementation of algorithms in physics/chemistry. I have also extensive experience of Python which I have used in several contexts, for example as a wrapper/controller for low level language codes, as a tool for fitting/modelling data with scipy, as a means to visualize data using matplotlib and to generate reports and explore trends with Jupyter. My work on the public domain can be found on my github page.

I am highly motivated by the developments in the field of Data Science, as they represent a tangible step towards a better understanding of the world around us due to the large range of environments where these methods are finding application. My interest in the field of Data Science is further motivated by the technical/theoretical challenges that this domain represents, for example in the development and implementation of new methods.

Leveraging the incredible promise of Data Science will be vital for businesses in the coming years as it will allow them to predict market trends in order to make better-informed decisions; Data Science will also allow companies to gain a deeper understanding of customers, identify problems in manufacturing processes and it could even assist companies in the design of new products by harnessing the power of artificial intelligence. These are all very exciting developments and I would like to be part of this new wave of knowledge.

I'd be thrilled to learn more about this job opening. Thank you for your time, I look forward to hearing from you.

Best Regards,

**Mario Burbano**

Attached: Curriculum Vitae