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ABOUT ME

I am a young dynamic researcher with a Bachelor's degree in Bioinformatics from La Sapienza University of Rome (Graduated 2022 with Honors) pursuing a Masters Degree in Computational Biology at the Technical University of Madrid (UPM).

My current research interest lies in the computational modelling of biological processes with the highest possible fidelity. To me, there is no greater thrill than delving into the intricacies of biological systems, teasing out the underlying mechanisms that govern their behavior, and using that knowledge to create models that accurately simulate reality.

I relish the challenge of pushing the boundaries of what is currently possible. Whether it's be developing algorithms to analyze complex biological interaction, exploring novel data science and artificial intelligence techniques , or working with cutting-edge tools to model biological systems, a thrive in pushing the boundaries of what is currently possible.

During my time as an intern working under Krzysztof Wabnik at the Center for Plant Biotechnology and Genomics (CBGP) in Madrid, I gained experience in identifying key principles of self-organization, coordination, and synchronization in multicellular collectives of plant cells and microbial consortia. Additionally, I worked on modelling lateral root branching, and have begun implementing basic frameworks for next-generation simulation platforms leveraging the computational power of GPUs.

Previously, I worked at the Rome Center for Molecular Design, designing a pharmacophore-based molecular alignment and virtual screening package (PyPharm) which was implemented on the www.3d-qsar.com web-server. Together, these experiences helped me develop project management skills and agile development.

These projects also have allowed me to develop my expertise in bioinformatics, computational biology, and chemoinformatics, and I am well-versed in a variety of programming languages including Python, R, and am currently developing in C# and C++/HLSL through the Unity engine.

In the next year, I hope to continue my research as a postgraduate student developing faster, more accessible bioinformatics software in the laboratory of Krzysztof Wabnik (CBGP) to advance the research line I am enthralled with. I am on a mission to unravel the mysteries of life using the power of data, and I cannot wait to see where this incredible journey takes me.