

Via delle orfane 2,  
Interno #6  
Trento, Italy  
CAP 38122

September 14, 2023

Dear Giovanni Provenzano,

I'm excited to apply for the research fellow position at University of Trento that I found on your laboratory website. I believe my computational skills and eagerness to learn would make me a great fit for your laboratory. As a student of this university I'm thrilled at the opportunity to bring my unique style and passion for research to such an esteemed institution.

During my bachelor in Computer Science I gained experience in handling large dataset, solving algorithmic and machine-learning problems while prioritizing performance and maintainability. I applied this skills in my bachelor thesis, where I developed a computational pipeline that utilized transcriptomic data to investigate how cancer-related mutations in untranslated regions affect gene translation. Continuing my studies in Quantitative and Computational Biology I applied my computational skills to the biological domain, honing my proficiency in analyzing biological data using computational methods, making inferences to propose explanations or suggest additional experimental procedures. My focus was centered on neuronal systems and their mathematical modelling, and I complete project involving computational simulation of neuronal biophysics whenever feasible. Currently, I am engaged in an internship at CIMEC, where I am developing a computational model of the honeybee olfactory system to reveal neural correlates of sleep. This internship has offered me the opportunity to explore large-scale neuronal models and fine-tune them to accurately replicate observed behavior.

I am excited to join your lab and contribute to your research on the neurobiological mechanisms underlying neuropsychiatric disorders. I have always been excited to study the brain develops and learn and how the genome guides its development together with external stimuli. I believe that my background in computational biology and machine learning will allow me to make valuable contributions to your lab, both in building computational models of the brain and proposing data-driven approach to analyze experimental data.

Thank you for your time and consideration. I'm looking forward to learning more details about the research fellow position. Growth is essential to my continued success, and I'm excited for the chance to be a part of your team. My proven track record and University of Trento's quality research are a winning combination for further increasing our understanding on the intricate neuronal processes.

Sincerely,

Giacomo Fantoni