Nicola Greco

Bioinformatician

Contacts

| +39 324 783 7371
| niccogreek@gmail.com
| linkedin.com/in/nicogreeco
| github.com/nicogreeco

Skills

- Python – pandas, networkx, tensorflow
- Bash/Linux
- Git
- R – ggplot, tidyverse
- PyMol
- Cytoscape
- Machine Learning

Certifications

IELTS English certification – 7.5

Languages

Italian

English

About me

I am a 22-year-old Bioinformatics student with a primary fascination in evolutionary biology. My academic pursuits are deeply engaged with the mathematical and computer science aspects of my field, especially in utilizing network science, machine learning and deep learning to tackle complex biological questions. This blend of interests allows me to explore innovative approaches at the intersection of informatics and biology. For a deeper insight into my projects, including a project on Protein-Protein Interaction (PPI) networks and Deep Learning applications for MEG data, I invite you to visit my GitHub profile.

Experience

Research intern at Utrecht University — Jan 2024 - Current

(Theoretical Biology and Bioinformatics group)

I conducted an in-depth evolutionary analysis of newly discovered winged-helix domains (WHDs) within the Dam1 and Ska kinetochore complexes using advanced bioinformatics tools. Due to challenges in clarifying their evolutionary history with traditional phylogenetic methods—owing to the domains' short length and high divergence—I employed profile-based searches (HH-suite) and protein structure predictions coupled with structure-based searches (Foldseek) to identify homologous WHDs across eukaryotic species. My work involved constructing and analyzing homology networks to explore their evolutionary relationships and formulating new hypotheses regarding their origin.

Thesis intern at Sapienza University — Mar 2023 – Jun 2023

(Dept. Biology and Biotechnologies)

Investigated the role of long non-coding RNAs in medulloblastoma by using bioinformatics tools to analyze expression quantitative trait loci (eQTLs) within specific genomic loci. This involved data extraction from the GTEx project and dbSNP database, followed by analysis to identify associations between SNPs and nearby genes.

Education

MSc in Bioinformatics and Biocomplexity — 2023 - Current

(GPA: 8.3) — Utrecht University | Utrecht

Currently enrolled in a multidisciplinary program with a focus on computational sciences, biological big data analysis, and modeling complex biological systems. Specialized coursework includes Evolutionary Bioinformatics, Biological Modeling and elective courses in Knowledge Graphs Databases, Deep Learning, and Network Sciences.

BSc in Bioinformatics — 2020 - 2023

(GPA: 29.4/30) — Sapienza University | Rome

My bachelor's degree program combined classical biology with computer science, establishing a solid foundation in biological sciences and computational skills. The curriculum included core subjects such as cell biology, molecular biology, biochemistry, and genetics, supplemented with programming, statistics, and bioinformatics algorithms. Electives in Algorithms for Artificial Intelligence and Machine Learning further enhanced my technical expertise.

High School Diploma in Science — 2015 - 2020

Liceo Scientifico G.B. Morgagni | Rome