Santiago Castro Dau

Education

2020–2023 **MSc**, *Computational Biology and Bioinformatics*, ETH Zürich.

2018 **Visiting Student**, University of Tokyo.

2014–2019 **BA**, *Chemical Engineering*, National Autonomous University of Mexico.

Experience

2023 **Software Engineer** at the Food Systems Biotechnology group in the D-HEST at ETH.

Supervisor Michal Ziemski

Description Python package development for microbiome analysis.

2022–2023 **Master Thesis** at the IBM Research in the Artificial Intelligence for Single Cell Research group.

Supervisor Pushpak Pati and Marianna Rapsomaniki

Description In this project, I developed an interpretable AI model for metadata prediction using tissue image data.

2022 **Research Internship** at the Cortical Computation group, Institute of Neuroinformatics at the University of Zurich, and ETH Zurich.

Supervisor Matthew Cook

Description In this project, I explored how learning in the brain can be modeled through mixture model parameter inference and artificial neural networks.

2021 **Research Internship** at the Computational Evolution group, D-BSSE, ETH Zürich.

Supervisor Jana Huisman

Description For this project I explored whether a method for estimating SARS- CoV-2's effective reproductive number could also be applied on data from other countries.

2019–2020 **Research Internship** at the National Institute of Genomic Medicine in Mexico City.

Supervisors Dr. Enrique Hernández Lemus

Description During this research project, I studied whether genes that are frequently copy number mutated in breast cancer could be shaping the architecture of the transcriptional network.

Contributions to Publications and Repositories

2020 Participated in the CTD^2 Pancancer Drug Activity DREAM Challenge.

2023 I have contributed with several PRs to the q2-moshpit, q2-assembly, and ATHENA packages.

Programming Languages

Advanced Python, R, git/GitHub, C++, SQL, Matlab, Bash, LaTeX *Fluency in popular libraries and command line tools.*

Relevant Information

First-hand experience with bash scripting, workflow management systems, and high-performance computing environments, and machine learning models. Familiarity with different types of medical data. Experience developing packages in Python adhering to various standard technologies and best practices.

+41762011813 • sanntiago5@gmail.com • 5antiago • Sann5

Special Achievements

2023 Selected for an oral presentation at Basel Computational Biology Conference 2023, Switzerland's main event in the domain of Computational Biology and one of the major events of its kind in Europe.

2021 Winner of ETH Week 2021: "Health for Tomorrow", an interdisciplinary, innovative problem-solving challenge.

2020 Recipient of "Jóvenes de Excelencia Citibanamex" scholarship for promising students.

2019 Bachelor's graduated with honors due to exceptional academic performance at UNAM, one of the top academic institutions in Latin America.

2018 Recipient of "Beca de Movilidad Internacional" scholarship to study at the University of Tokyo in Japan, one of the world's top academic institutions.

Languages

Spanish: Mother tongue. **English**: C1 **German**: B1.