Nicholas Goguen-Compagnoni

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EDUCATION

University of Edinburgh
September 2020 - May 2024

BSc Biotechnology and Computer Science Dual Major - Top 20 globally for both disciplines   *Edinburgh, United Kingdom*

- Achieved a 2:1 Degree. Converted GPA: 3.5.
- Relevant coursework in algorithms and data structures, operating systems, compilers, and machine learning.

WORK EXPERIENCE

Institute for Computing Systems Architecture
May 2023 – September 2023

Junior Research Assistant   *Edinburgh, United Kingdom*

- Independently explored research topics to find problems in computer systems that I was passionate about.
- Documented my research on NUMA architectures. Demonstrated a monotonic 5% boost in performance as nodes are added.
- Created automated and isolated experimental conditions in linux with shell scripting using a bare-metal hypervisor.
- Tested my research on high-throughput genetic sequencing software (Samtools and FastQC).

Easterseals NJ
May 2022 – August 2022

IT Intern   *East Brunswick, NJ*

- Identified and eliminated incorrect data across company database systems using data exploration with R.
- Made a presentation offering recommendations for improved data collection to higher management.
- Allowed field employees to spend more time supporting their customers instead of managing software errors.
- Ensured employee and customer data were transferred to company databases reliably. Self-taught PostgreSQL to understand and contribute to company databases.

PROJECTS AND ACHIEVEMENTS

Honors Project 2023-2024

Balancing complexity and efficiency in microbial factories with machine learning

- Reached out to my supervisor to self-propose a project highlighting my skills in biology and computer science.
- Carried out an extensive literature review on bayesian statistics, metabolic engineering, machine learning, and biological modeling.
- Wrote and tested a computational model in Julia, based on a published set of ordinary differential equations for p-aminostyrene production.
- Refactored example python code provided by the supervisor to be easier to understand and extend upon.
- Ran experiments proving that BayesOpt finds optimal architectures to minimize pathway complexity and maximize production.

Text Editor (in progress)

- Developing a text editor in Python. Architecting the project's backend software design and implementation. Staging branches and commits to GitHub and performing code reviews. Test-driven and Agile development.

Varsity Foil Fencer

- Scottish Student Sport Individuals gold medalist 2023-2024, Semifinalists of BUCS Premier League 2021-2022.
- Raised novice engagement as 2022-2023 Vice President by mentoring at beginner sessions twice a week, doubling attendance for both sessions from the previous year.