ELEFTHERIA BERES

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EDUCATION

Northwestern University, Evanston, IL — Expected Graduation Date: Jun 2024
Bachelor of Science: Computer Science — Cumulative GPA: 3.99

TEACHING

Peer Mentor: GEN_ENG 205-1: Engineering Analysis 1 — Sept 2023-
Northwestern University Department of Electrical — *Evanston, IL*

- Hold five hours of office hours per week.
- Lead discussion of weekly MATLAB homework assignment with a focus on understanding computational algorithm writing.
- Guided student learning of data analysis and visualization and computational problem-solving for data science.

Peer Mentor: BMD_ENG 220: Introduction to Biostatistics — Sep 2022-Dec 2022, Sep 2023-
Northwestern University Department of Biomedical Engineering — *Evanston, IL*

- Hold two weekly office hours virtually and in person.
- Grade student exams and weekly problem sets.
- Facilitate students understanding of statistical methods for biomedical engineering experiments.

Peer Mentor: DATA_ENG 200: Foundations of Data Science — Jan 2023-Mar 2023
Northwestern University Department of Computer Science — *Evanston, IL*

- Held three weekly office hours and answer student questions on online course platform.
- Guided student learning of data analysis and visualization and computational problem-solving for data science.

RESEARCH

Simulating Evolutionary Robotics — Feb 2023-
Northwestern University Xenobot Lab — *Evanston, IL*

- Engineer and program computer simulation for designing and evolving virtual robots.
- Designing first ever simulation of virtual evolving robotics with novel biological inspirations.
- Work on evolving simulated robots to learn a given arbitrary behaviour.

Family Aware Evolutionary Algorithms — Feb 2023-Apr 2023
Northwestern University Xenobot Lab — *Evanston, IL*

- Design and program evolutionary algorithms for optimizing simulated robot bodies and neural networks.
- Work on balancing diversity and optimization in genetic algorithms by limiting the number of descendants.

PyFlowBAT: An Open-Source Python Package for Flow Cytometry Batch Analysis — Mar 2022-
Northwestern University Leonard Lab — *Evanston, IL*

- Conceptualize and develop Python package for rapid analysis of flow cytometry data for synthetic biology.
- Collaborate with Ph.D. students and postdoctoral researchers at Northwestern to improve code and usability.
- Present project goals and progress in lab meetings and lead publication writing (paper writing in progress).

PUBLICATIONS

Poster Presentations

1. **Beres E**, et al. PyFlowBAT: An Open-Source Software Package for Performing High-Throughput Batch Analysis of Flow Cytometry Data. Poster presented at: EBRC Annual Meeting; 2023 Jun 5-6; Evanston, IL.

HONORS AND AWARDS

Summer Undergraduate Research Fellowship — Summer 2023
Northwestern University Department of Computer Science — *Evanston, IL*

Summer Undergraduate Research Grant — Summer 2022, Summer 2023
Northwestern University Office of Undergraduate Research — *Evanston, IL*

High Honors — Fall 2022-Spring 2023
Northwestern University McCormick School of Engineering — *Evanston, IL*