Severin Ihnat

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EDUCATION

Columbia University New York, NY
Master of Computer Science
Related Coursework: Data Structures (Java), Linear Algebra and Probability Expected May 2026

University of Rochester Rochester, NY
Bachelor of Science in Biomedical Engineering May 2024
GPA: 3.74/4.0
Awards: Alpha Eta Mu Beta Honors Society (top 20% of class), Dean's List (all semesters)

SKILLS & INTERESTS

- Programming Languages: Python, MATLAB, Java
- Frameworks/Tools: Git, PySpark, Unix, WSL, Cygwin64, Excel, SOLIDWORKS, Prusa Slicer, Hamilton STAR
- Wet Lab Skills: Tissue Culture, Cell Transfection, Cell Transformation
- Languages: Ukrainian (advanced), French (basic)

RESEARCH EXPERIENCE

Columbia University New York, NY
Computer Science Researcher Sep 2024 - Present

- Leveraging Python for PDB-Slim data extraction and formatting from literature and databases for ML training
- Collaborating on development and documentation of a pipeline for identifying PBD domains on GitHub, curating data on 2.3M PBD-SLiM interactions across 89 PBD families (tools: Python, Git)

University of Rochester Medical Center Rochester, NY
Imaging Sciences Researcher Jan 2023 - May 2024

- Designed advanced ultrasound image reconstruction through custom Delay-and-Sum beamforming across 96 element ultrasound transducer ring array
- Optimized code to reduce calculation time by 30% by leveraging interpolation to scale up image
- Incorporated sound speed map input to accurately compute ultrasound delay between focus points and transducers, improving precision by accounting for sound speed variations of up to 20% (tools: MATLAB)

University of Rochester Medical Center Rochester, NY
Biomedical Engineering Researcher Nov 2022 - May 2024

- Developed MATLAB code to refine bone graft images by thresholding, filling holes, and removing noise
- Automated identification of slice with highest vessel concentration and calculated metrics (tools: MATLAB)

PROFESSIONAL EXPERIENCE

Regeneron Pharmaceuticals Tarrytown, NY
Automation Core Intern May 2024 - Aug 2024

- Automated development of HEK293 cell lines utilizing Hamilton methods for cell splitting, cherry-picking, and cytometer plate creation, eliminating need for manual labor and processing up to 96 wells per plate
- Created Python scripts to process image cytometer data and generate files for liquid handler cherry-picking

NIDUS MB Technologies Rochester, NY
Senior Design Student Dec 2023 - May 2024

- Led group of 3, utilized openCV and inverted microscope feed to automate cell picker descent into microbubbles, also created GUI to control device movement (Tools: Python, OpenCV, tKinter)

University of Rochester Learning Center Rochester, NY
STEM Tutor Nov 2023 - May 2024

- Led one on one tutoring sessions with students in need of support in biomedical engineering, chemical engineering, computer science, math, physics, chemistry, and biology

Regeneron Pharmaceuticals Tarrytown, NY
Automation Core Intern May 2023 - Aug 2023

- Automated cell plate creation for bioassays on Hamilton STAR with customizable serial dilutions for 96 well and 384 well plates
- Wrote Python scripts for concentration calculations and designed a GUI for serial dilution layouts, supporting experiment designs