Ilia Zenkov

647-568-4727 | ilzenkov@gmail.com | ilia-zenkov | github | Research

Skills

Languages	Python, SQL, Java, LaTeX
Technologies	Django, PostgreSQL, Spark, Jupyter, Git
Tools	PANDAS, NumPy, Matplotlib, Seaborn, sklearn, SciPy, psycopg, Scrapy, spaCy, statsmodels, Kibana

Experience

McGill University; Lady Davis Institute
Montreal, QC
RESEARCH ASSISTANT
Sept 2017 - May 2018

- Wrote **Python** script to automate conversion of high throughput experiment data files into **JSON** for storage using **PostgreSQL**, enabling automated statiscal analysis using Python data science libraries **PANDAS, Statsmodels, NumPy**
- Designed a data pipeline for high throughput drug screening using **PostgreSQL** and **Python** libraries **PANDAS, Matplotlib** and **Cytoflow** which was used to identify a drug constituting a primary objective in a **$1m federal grant**
- Accepted presenter at the Lady Davis Institute Cancer Research Axis Seminar 2018
- Developed from scratch and optimized experiments and statistical analysis using **Python** on an independent research project from proof-of-concept through to live-animal experiment stage, culminating in a $20 000 project grant proposal
- Awarded an independent research subsidy of $5 000, paying for cost of reagents used for independent research project

Harvard Medical School
Boston, MA
VISITING UNDERGRADUATE RESEARCHER
Sept 2016- May 2017

- Improved speed of statistical analysis and visualization of experimental data using **Python** libraries **SciPy, PANDAS, Matplotlib** and **Seaborn**; streamlined data visualization and access by setting up a lab web server using **Django**
- Built a **Python** tool providing precise and lab-accessible tracking of biological samples using **PostgreSQL** for data storage, Python with **Matplotlib** for visualization, and **Django** to display up-to-date inventory on a lab web server
- Designed from scratch, conducted, and optimized experiments and data analysis validating a collaborative nanoparticle research proposal; research accepted and published in a high-impact peer reviewed journal

University of Waterloo Centre for Teaching Excellence
Waterloo, ON
SPECIAL PROJECTS COORDINATOR
Jan 2016 - May 2016

- Used **Python** statistics and plotting libraries **NumPy, SciPy** and **Matplotlib** to identify and statistically analyze shortcomings in workshop attendance with respect to academic term and attendee faculty membership

Peer-Reviewed Publications

Co-Author: Sugar-Nanocapsules Imprinted with Microbial Molecular Patterns for mRNA Vaccination
NANO LETTERS 2020 20 (3), 1499-1509 • IMPACT FACTOR 12.4

Co-Author: Flat Cell Culturing Surface May Cause Misinterpretation of Cellular Uptake of Nanoparticles
ADVANCED BIOSYSTEMS 2018 2 (6), 1800046 • 2020 EXPECTED IMPACT FACTOR 7.5-10

Education

University of Waterloo
Waterloo, Ontario
B.SC HONORS BIOPHYSICS
2014 - 2019
Awawrded University of Waterloo President's Scholarship of Distinction
Courses: Differential Equations, Linear Algebra, Statistical Mechanics, Computational Physics, Quantum Info Processing

Personal Interests

Pianist: Classically trained - Rachmaninoff preludes are a favourite

Powerlifter: Standing Canadian junior national bench press record holder since 2017

Pizzaiolo: Statistically oplimizing the perfect crust