

# Ryan Zomorodi

Research Analyst · Data Scientist

✉ rzomor2@uic.edu 🏠 ryanzomorodi.github.io 🆔 0009-0003-6417-5985 🐙 GitHub 🔗 LinkedIn

## Education

---

### Master of Science in Health Analytics

Chicago, IL

University of Illinois Chicago

Aug 2023 - Present

- GPA: 4.00

### Bachelor of Science in Biological Sciences

Chicago, IL

University of Illinois Chicago

Aug 2019 - May 2023

- Minors: Computer Science & Public Health
- Graduated with Highest Distinction
- Honors College
- GPA: 4.00

## Work Experience

---

### Research Associate

Chicago, IL

Children's Environmental Health Initiative

Jun 2023 - Present

- Instructed state, tribal, and local public health professionals on the use of GIS to assess and address chronic health disparities.
- Performed geospatial analysis of hospital and physician accessibility utilizing two-step floating catchment area methods.
- Developed python Rate Stabilizing Tool to generate generating reliable, local-level age-standardized measures of chronic disease using the restricted CAR bayesian model.

### Pharmacy Technician

Arlington Heights, IL

Walgreens

Jul 2021 - Jun 2023

- Utilized electronic health records software to access patient medical records, input insurance, allergy, and health condition records, and resolve patient inquiries
- Resolved insurance inquiries and resubmitted claims in order to ensure patient prescription adherence
- Filled, mixed, and dispensed prescriptions for approval by pharmacists

### Sales Associate

Arlington Heights, IL

Marshalls

Jul 2017 - Jul 2019

- Demonstrated problem-solving and teamwork skills by resolving customer complaints and collaborating with other staff members
- Managed inventory, cash register and merchandising tasks according to company standards
- Provided excellent customer service, which resulted in the doubling company goals for donations and credit card registrations

## Skills

---

### Technical Skills

C, D3, git, ggplot2, HTML, LaTeX, markdown, Plot.js, Python, R, SQL

### Software

ArcGIS Pro, Microsoft Office Products

## Service

---

### Youth Mentor & Tutor

Genify (formerly: Miracle for Youth)

May 2020 - Mar 2022

### Little Village READS Tutor

Erie Neighborhood House

Jan 2020 - Nov 2020

### Peer & Near-Peer Tutor

UIC Honors College Tutoring Center

Jan 2020 - May 2020

### Student Volunteer

Northwest Community Hospital

Jul 2018 - May 2019

## Teaching Experience

---

### Using GIS to Study Social Determinants of Health with R

Northern Arizona University Center for Health Equity Research

[Resource Link](#)

Jun 06, 24 - Jun 07, 24

### State Health Departments Chronic Disease Surveillance

GIS Capacity Building Project

Mar 06, 24 - Jul 31, 24

### An Introduction to ArcGIS Online Mini-Course

GIS Capacity Building Project

Oct 17, 23 - Oct 24, 23

### Tribal Epidemiological Centers Chronic Disease Surveillance

GIS Capacity Building Project

Oct 10, 23 - Jan 31, 24

### A Gentle Introduction to GIS Mini-Course

GIS Capacity Building Project

Sep 19, 23 - Sep 26, 23

## Presentations

---

### RNA-sequencing analysis of Macrophage Hyperactivation

UIC Undergraduate Research Forum

Apr 2023

### Empowering Community Members to Investigate and Address Chicago's Health Disparities

American Public Health Association

Nov 2022

### Developing Student Workshops to Increase Community Engagement in Addressing Chicago's Health Disparities

UIC School of Public Health Research and Scholarship Week Lightning Talks

Apr 2022

### Empowering Community Members to Investigate and Address Chicago's Health Disparities

UIC Minority Health Conference

[Recording Link](#)

Apr 2022

## Publications

---

### Significance of IL-34 and SDC-1 in the pathogenesis of RA cells and preclinical models

Clinical Immunology

May 2023

• 10.1016/j.clim.2023.109635

### Inhibition of IRAK4 dysregulates SARS-CoV-2 spike protein-induced macrophage inflammatory and glycolytic reprogramming

- 10.1007/s00018-022-04329-8

## Metabolic reprogramming of macrophages instigates CCL21-induced arthritis

Immunology &amp; Cell Biology

Dec 2021

- 10.1111/imcb.12512

## Metabolic regulation of RA macrophages is distinct from RA fibroblasts and blockade of glycolysis alleviates inflammatory phenotype in both cell types

Cellular and Molecular Life Sciences

Oct 2021

- 10.1007/s00018021039785

## Interleukin-34 Reprograms Glycolytic and Osteoclastic Rheumatoid Arthritis Macrophages via Syndecan 1 and Macrophage Colony-Stimulating Factor Receptor

Arthritis &amp; Rheumatology

Sep 2021

- 10.1002/art.41792

## Tofacitinib therapy intercepts macrophage metabolic reprogramming instigated by SARS-CoV-2 Spike protein

European Journal of Immunology

Jun 2021

- 10.1002/eji.202049159

## CCL25 and CCR9 is a unique pathway that potentiates pannus formation by remodeling RA macrophages into mature osteoclasts

European Journal of Immunology

Jan 2021

- 10.1002/eji.202048681

## IRAK4 inhibition: a promising strategy for treating RA joint inflammation and bone erosion

Cellular &amp; Molecular Immunology

May 2020

- 10.1038/s41423-020-0433-8

## Macrophages are the primary effector cells in IL-7-induced arthritis

Cellular &amp; Molecular Immunology

Jun 2019

- 10.1038/s41423-019-0235-z

## Impact of obesity on autoimmune arthritis and its cardiovascular complications

Autoimmunity Reviews

Jun 2018

- 10.1016/j.autrev.2018.02.007

## Honors

---

### Highest Distinction

UIC Department of Biological Sciences

2023

### Pasteur Prize Nominee

UIC Department of Biological Sciences

2023

### Research Grant

UIC Honors College

2022

### Travel Grant

UIC Honors College

2022

## **Maurice Prize**

UIC Student Leadership and Civic Engagement

2022

## **Undergraduate Most Outstanding Presentation**

UIC School of Public Health Research Week

2022

## **Chancellor's Student Service Award**

UIC Student Leadership and Civic Engagement

2022

## **President's Volunteer Service Award - Bronze**

UIC Student Leadership and Civic Engagement

2021

## **1st place - Division 4**

Collegiate Chess League

2021

## **Chancellor's Student Service Award**

UIC Student Leadership and Civic Engagement

2021

## **Research Grant**

UIC Honors College

2020

## **Professional Membership**

---

### **American Public Health Association**

*Jan 2022 - Present*

### **Harvard Innovation Lab**

*Sep 2022 - Aug 2024*

### **Clinton Global Initiative University Fellowship**

*Mar 2023 - Nov 2023*

### **American Society for Biochemistry and Molecular Biology**

*Oct 2020 - Dec 2022*

## **Leadership**

---

### **Secretary**

UIC Society of Future Physicians

*2021 - 2023*

### **President**

Chess Club at UIC

*2021 - 2023*

### **Secretary**

UIC American Society for Biochemistry and Molecular Biology

*2021 - 2022*

### **Media chairman**

Spreading Healthcare Awareness through Reciprocal Education (SHARE)

*2020 - 2022*

### **Student leader**

UIC Student Leadership and Civic Engagement

*2019 - 2022*

### **Chapter representative**

UIC American Society for Biochemistry and Molecular Biology

*2020 - 2021*

### **Vice-president**

Chess Club at UIC

*2020 - 2021*