

Samir Rachid Zaim

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Github: <https://github.com/srz-venmor>

Major Research Interest

Developing statistical and decision support algorithms in precision medicine, particularly in methods development for differential expression in single-subject analytics, Electronic Medical Record (EMR) based case-based reasoning, and high-dimensional variable selection.

Education

PhD Student, Statistics 2016 – 2021 (expected)
University of Arizona, Tucson, AZ
Graduate Interdisciplinary Program in Statistics
Major: Statistics, Statistical Informatics Track
Minor: Systems & Industrial Engineering
Advisors: Yves Lussier (Biomedical and Bioinformatics) & Helen Hao Zhang (Statistics)

Bachelors of Arts, Mathematics/Statistics 2010 – 2014
Carleton College, Northfield, MN
Major: Mathematics/Statistics
Concentration: French and Francophone Studies
Honors: Magna Cum Laude

Relevant Experience

University of Arizona, Department of Medicine Aug 2016 - Present
Graduate Research Assistant Tucson, AZ, USA
Supervisor: Dr. Yves Lussier

- Electronic Medical Record Case-Based Reasoning: Lupus Case Study
- Electronic Medical Record Banner Case Study: Environmental Associations
- Single-Subject RNA-Seq Simulation Study: Pathway Biomarkers
- Single-Subject RNA-Seq Case Study: TCGA Breast Cancer Study

Pieces Technologies Inc Mar 2016 – May 2016
Data Scientist Dallas, TX, USA
Supervisor: Dr. Anand Shah

- US Oncology: Modeling Patient Progression Via Outpatient Visit Data
- WHHS: Predicting and Preventing 30-day Hospital Readmissions

Parkland Hospital & Health Systems, CTR for Clinical Innovations Jul 2014 – Mar 2016
Collegiate Research Fellow Dallas, TX, USA
Supervisor: Dr. Brian Lucena

- PHHS: Early Detection Classifier for Septic Patients in the ER
- PHHS: Predicting and Preventing 30-day Hospital Readmissions
- UHS: Developing an NLP Classifier for COPD Patients

- PHS: Modeling Asthma-Induced ER Visits

University of Wisconsin – Eau Claire Nov 2012 – Dec 2012
Statistical Genetics Undergraduate Research Assistant Eau Claire, WI, USA
 - Simulated and modeled 3-way admixture populations using HGDP Data

Manufactura de Aluminio CA July 2012-Aug 2012
Statistics Intern Valencia, CBB, Venezuela
 - Developed a 6-Sigma control process for Ford, Toyota, and Chrysler wheel production

Awards & Honors

Magna Cum Laude, Carleton College, Northfield MN Jun 2014
Frank Karel Fellowship in Public Interest Communications, Washington D.C. Jun-Aug 2013
 • *Communications Fellow, The Education Trust*
Carleton College 2012 Research Symposium, Northfield MN Oct 2012
 • Recognition for conducting advanced work in French and Francophone Studies.

Service, Volunteering & Leadership

Statistics GDP Graduate Representative, University of Arizona Aug 2017-Present
Program Director, Books for Africa Carleton College Sep 2011 – June 2014
Program Director, Adult ESL Carleton College April 2011 – June 2013
Program Director, Latino Male Youth Mentorship Northfield Middle School Sep 2013 – June 2014
Student Volunteer, S.Y.STEM Coalition Tucson Oct 2017 – Present
Student Volunteer, Lil' Sprouts Tucson Village Farm Oct 2016-Nov 2016
Graduate Mentor Volunteer, Sports Analytics University of Arizona January 2018 – Present
International Conference on Health Informatics 2015, Dallas TX
 • Committee Sub-reviewer Jun 2015
Carleton College, Rice County School District, Northfield MN
 • Statistical Consultant Jan – Apr 2014

Publications

1. Zaim SR*, Li Q*, Schissler AG*, Lussier YA. [“Emergence of pathway biomarkers from converging heterogeneous Genome x Environment responses”](#) (* joint first authorship). *Pacific Symposium on Biocomputing*. 2018; 23:484-495.
2. [Boyd A, Li J, Kenost C, Zaim SR, Krive J, Mittal M, Satava R, Burton M, Smith J, Lussier YA. “ICD-10 procedure codes produce transition challenges”](#). AMIA Joint Summit 2018, In press.

Teaching Experience

University of Arizona Sports Analytics, Graduate Volunteer, Tucson, AZ Jan 2018– present
 • Taught data visualization and statistical techniques using men’s basketball data
Carleton College French Department, Teaching Assistant, Northfield, MN Sep 2012– June 2014
Carleton College Spanish Department, Teaching Assistant, Northfield, MN Sep 2011– Sep 2013

Invited Talks and Guest Lectures

- University of Arizona, Department of Mathematics**, Tucson AZ March 2018
- Introduction to Decision Trees and Random Forests in Sports Analytics
- University of Florida, College of Journalism and Communications**, Gainesville FL Feb 2014
- Research summary of my experience at the Education Trust.
- Carleton College, 2012 Research Symposium**, Northfield MN Oct 2012
- Presented research on French-Algerian relations through soccer and sports immigration.

Languages

Spanish: Native/Mother tongue
English: Fluent
French: Fluent
Arabic (Moroccan *darija*): Proficient

Other Interests

Sports: Soccer, Mountain Biking, Swimmer, Basketball, Ultimate Frisbee
Music: Guitar, Cuatro, Oud
Volunteer: STEM Outreach (S.Y.STEM Coalition), Youth Outreach