Akane B. Fujimoto

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Education

Georgia Institute of Technology (Atlanta, GA)

Ph.D. in Industrial Engineering   *AUGUST 2018 -*

M.S. in Industrial Engineering   *AUGUST 2018 - AUGUST 2021*

Advisor: Dr. Pinar Keskinocak

Research Interests: Medical decision making, health disparities, global health, infectious disease modeling, evaluation of intervention strategies

Rochester Institute of Technology (Rochester, NY)   *MAY 2018*

B.S. in Industrial and Systems Engineering   GPA: 3.99

Minors: Applied Statistics, Management Information Systems

Graduated Summa Cum Laude

Skills

Programming: R, R Shiny, Python, MATLAB, SQL, Simio

Languages: English (fluent), Spanish (native)

Research Experience

Centers for Disease Control and Prevention (CDC)   ATLANTA, GA

ORISE Fellow- Data Scientist - Division of Global Migration and Quarantine   *June 2021 – present*

- Lead statistical analysis and apply data science and predictive modelling techniques to merge human mobility, genomic, and epidemiological data to enhance decision-making for COVID-19 response.

Georgia Institute of Technology   ATLANTA, GA

Graduate Research Assistant - Dept. of Industrial and Systems Engineering   *August 2018 – present*

COVID-19 Pandemic

- Building simulation models to evaluate various resource allocation scenarios (diagnostic and serology testing and vaccines) to improve health outcomes and reduce the spread of the pandemic.
- Developing <u>dashboards</u> and decision tools by integrating and analyzing various datasets to identify health disparities in underserved populations and recommend interventions targeted to at-risk populations.
- Collaborating with the Georgia Department of Public Health and community partners across Georgia through the NIH RADx Underserved Populations (RADx-UP) grant.

Prenatal Health

- Developed decision support models for prenatal screening that account for patients' profiles and preferences to facilitate decision making and minimize adverse outcomes.

Children's Healthcare of Atlanta   ATLANTA, GA

Nursing Research Graduate Research Assistant - Advanced Analytics and Outcomes   *January 2019 – May 2021*

- Evaluated workforce models of advanced practice providers in different departments of the hospital to recommend resource allocation strategies to improve patient care and job satisfaction.
- Supported nurse-led projects with research methodology development, statistical analysis, data visualization, and interpretation and presentation of results.

Mayo Clinic   ROCHESTER, MN

Intern - Kern Center for the Science of Health Care Delivery   *June – August 2018*

- Participated in the design of a web-based tool for patients in the prenatal screening space.
- Reviewed existing literature on prenatal genetic screening and formulated mathematical models to calculate personalized risk of chromosomal aneuploidy.
- Extracted and analyzed patient data related to prenatal care and their outcomes.

Rochester Institute of Technology   ROCHESTER, NY

Undergraduate Research Assistant - Industrial Engineering Dept.   *May – August 2015*

- Performed statistical analysis of data from RIT's learning management system (LMS) to create predictive models for student performance and identify major indicators of student success.
- Developed linear regression models that successfully predicted student final class grade.

Undergraduate Research Assistant - Nano-Bio Interface Laboratory   *June 2014 – January 2015*

- Performed and analyzed a template-based nanomanufacturing process of a multiple-bore CNPs capable of carrying multiple fluids by taking into consideration different parameters in the pipette geometry formation, carbon vapor deposition and etching stages, which determine its physical characteristics.

Publications

P1. **Fujimoto, A.**, Keskinocak, P., Yildirim, I. (2021). Significance of SARS-CoV-2 Specific Antibody Testing during COVID-19 Vaccine Allocation. [Accepted in *Vaccine*]

P2. Gettis, M., **Fujimoto, A.**, Rullo, M., Millinger, J. (2021) "Family Support Practices to Impact Stressors in Parents of Critically Ill Children". [Accepted in *Journal of Doctoral Nursing Practice*]

P3. **Fujimoto, A.**, Ayer, T., Caughey, A., Keskinocak, P. (2020) "A Comparison of First Trimester Prenatal Screening Strategies for Down Syndrome with Maternal Age and Preferences Considerations." *Prenatal Diagnosis*, Vol.40, 553-1562. https://doi.org/10.1002/pd.5811

P4. Schlapfer, L., **Fujimoto, A.**, Gettis, M. "Comparison of Caloric Prescription and Degree of Malnutrition as an Accurate Predictor of Refeeding Syndrome and Cardiac Complications in Patients with Eating Disorders: A Retrospective Chart Review." [Submitted to *Nutrition in Clinical Practice*]

P5. Arowosola, A., **Fujimoto, A.**, Scheibel, O., & Schrlau, M. G. (2015). Fabrication of Theta Carbon Nanopipettes using a Template-Based Chemical Vapor Deposition Nanomanufacturing Process. *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*, 2(5), 896-901.

Posters and Presentations

P1. **Fujimoto, A.**, Ayer, T., Keskinocak, P., Yan, J., Pasupathy, K., Romero-Brufau, S., Sir, M., Wick, M., Nielsen, L., Rust, L. (2019). Decision Support Tool in the Prenatal Screening Space. Oral presentation at: Institute of Industrial and Systems Engineers National Conference 2019, May 19, Orlando, FL.

P2. **Fujimoto, A.** & Silvestrini, R. (2015). Using Learning Analytics and Statistics to Predict Student Performance from Learning Management Systems Utilization. Oral Presentation at: 2015 RIT Undergraduate Research Symposium, August 7, Rochester, NY.

P3. **Fujimoto, A.**, Arowosola, A., & Schrlau, M.G. (2015). Template-Based Nanomanufacturing of Multi bore Carbon nanopipettes. Poster presentation at: National Collegiate Research Conference, Harvard University, January 22-14, Cambridge, Massachusetts.

Professional Experience

Material Handling Institute (MHI) — TELECOMMUTE, CHARLOTTE, NC
Consultant — *October 2017 – May 2018*
- Classified material handling equipment based on product family and applications using material handling and ergonomics principles.
- Designed an interactive database using Excel (VBA) to highlight material handling equipment features and facilitate selection.

Bendix Commercial Vehicle Systems — ELYRIA, OH
Continuous Improvement Co-op – Supply Chain Excellence — *January - August 2017*
- Supported the Logistics team performing analysis of SAP data (production and transportation) and developing tools to improve and automate processes.
- Implemented an Access database for free-trade agreements (FTA) management that improved FTA customer certification productivity by 100%.

RIT Information & Technology Services — ROCHESTER, NY
Business Analyst and Project Manager — *June – December 2016*
- Led team of web developers and designers for the implementation of RIT's official student portal.
- Gathered and documented business and product requirements for new software releases and updates.

Mettler Toledo Hi-Speed — ITHACA, NY
Lean Manufacturing Co-op - Continuous Improvement — *August 2015 - Jan 2016*
- Collaborated with different departments to implement lean initiatives to improve inventory and assembly work practices.
- Eliminated 46% of vendor managed inventory and improved facilities layout resulting in 30% of floor savings and $25K in cost savings.

Honors & Awards

George Family Fellowship, Georgia Tech	2018 – 2021
David Cowan Scholarship, Healthcare Information and Management Systems Society (HIMSS) - Georgia Chapter	June 2020
Computing Research Association (CRA-W) Grad Cohort Workshop for Women Travel Award	April 2019
H. Milton Stewart Fellowship, Georgia Tech	2018 – 2019
Outstanding Undergraduate Scholar Award, RIT	Spring 2017
Nathaniel Rochester Society Scholar, RIT	2017 – 2018
Tau Beta Pi Stabile Scholar, Engineering Honor Society	2017 – 2018
Founders Scholarship for International Students, RIT	2013 – 2018
Honors Program, RIT	2013 – 2018
Dean's List, RIT	2013 – 2018

Teaching Experience

Georgia Institute of Technology   ATLANTA, GA
Graduate Teaching Assistant - Industrial and Systems Engineering Dept.   *August – December 2018*
- Supported student learning by explaining and reinforcing concepts during weekly office hours for Engineering Economy.

Rochester Institute of Technology   ROCHESTER, NY
Teaching Assistant & Tutor - Industrial Engineering Dept.   & Student Support Center   *Jun 2014 - May 2018*
- Tutored Industrial Engineering students in Probability and Statistics.

Service

Graduate Student Advisory Council - Dept.of Industrial and Systems Engineering, Georgia Tech
Representative   *Feb 2020 –*

Society for Health Systems - Institute of Industrial and Systems Engineers (IISE)
Student Committee   *2019 – 2020*

Society of Hispanic Professional Engineers (SHPE) - RIT chapter
Executive Board Member   *2013 – 2018*

Professional Associations

American Statistical Association (ASA)
Institute of Industrial and Systems Engineers (IISE)
Institute for Operations Research and the Management Sciences (INFORMS)