

# Hakeem Frank

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## Research Interests

Gaussian Processes • Computational Fluid Dynamics • Remote Sensing

## Education

2018-2020 **MSc in Mathematics**, California Polytechnic State University, Pomona

2013-2017 **BSc in Mathematics**, Xavier University of Louisiana

## Experience

07/2019-present **Esri**, Redlands, CA  
*Data Scientist, User Analytics*

01/2018-07/2019 **Esri**, Redlands, CA  
*Analyst, Business Development*

02/2018-05/2020 **California Polytechnic State University**, Pomona, CA  
*Research Assistant, Computer Vision*

09/2016-12/2016 **Propellor Startup Accelerator**, New Orleans, LA  
*Venture Fellow, Urban Agriculture*

05/2016-05/2017 **Center of Computational Science**, New Orleans, LA  
*Research Fellow, Computational Fluid Dynamics*

08/2015-05/2017 **Kostrov Lab**, New Orleans, LA  
*Research Fellow, Difference Equations*

## Papers & Talks

### JOURNAL ARTICLES

2020 **H. Frank**. "Gaussian Process Models for Computer Vision". *Master's Thesis*.

- 2017 A. Hoover, **H. Frank**, M. Kala, G. Sandler, R. Cortez, and L. Fauci. "Optimizing the Propulsive Performance of Heaving Panels with Nonuniform Elastic Profiles". *Submitted to Physical Review E in November 2017*.

#### PRESENTATIONS

- 2020 "Gaussian Processes for Aircraft Detection in Aerial Imagery", Oral Presentation, *California Polytechnic State University Mathematics and Statistics Colloquium*, Pomona, CA.
- 2017 "The Euler Number and Computer Vision", Oral Presentation, *Xavier University of Louisiana Math Colloquium*, New Orleans, LA.
- 2017 "Quantifying the Performance of Flexible Propulsors with Nonuniform Stiffness", Oral Presentation, *Xavier University of Louisiana Festival of Scholars Research Symposium*, New Orleans, LA.
- 2017 "Modeling the Impact of Sustainable Growing Practices on Urban Farms", Posterboard Presentation, *Xavier University of Louisiana Festival of Scholars Research Symposium*, New Orleans, LA.
- 2017 "Quantifying the Performance of Flexible Propulsors with Nonuniform Stiffness", Posterboard Presentation, *National Research Conference for McNair Scholars and Undergraduate Research*, College Park, MD.
- 2016 "Quantifying the Performance of Flexible Propulsors with Nonuniform Stiffness", Posterboard Presentation, *Annual Biomedical Research Conference for Minority Students (ABRCMS)*, Tampa, FL.
- 2016 "On the Boundedness Character of First Order Systems of Rational Difference Equations with Periodic Coefficients", Oral and Posterboard Presentation, *Xavier University of Louisiana Festival of Scholars Research Symposium*, New Orleans, LA.

#### Teaching

- Spring 2017 **Xavier University of Louisiana**, New Orleans, LA  
*Ordinary Differential Equations*, Teaching Assistant
- Fall 2016 **Xavier University of Louisiana**, New Orleans, LA  
*Calculus II*, Teaching Assistant
- Fall 2016 **Xavier University of Louisiana**, New Orleans, LA  
*Statistics I*, Teaching Assistant
- 2014-2017 **Xavier University of Louisiana**, New Orleans, LA  
*Calculus I-III*, Mathematics Resource Center Tutor

#### Fellowships & Awards

- 2017 Ronald E. McNair Postbaccalaureate Program Scholar

2016	National Science Foundation RTG in Computational and Mathematical Biofluids
2015	National Institute of Health MARC U-STAR Grant Awardee
2013	Xavier University of Louisiana Full Merit Scholarship

## Service

2020 - Present	<b>NorthStar GIS</b> , Redlands, CA <i>BRIDGE Program Volunteer</i>
2017-2018	<b>San Bernardino Mountains Wildlife Society</b> , Lake Arrowhead, CA <i>Wildlife Care Volunteer</i>
2016-2017	<b>Building Infrastructure Leading to Diversity (BUILD)</b> , New Orleans, LA <i>Peer Mentor</i>
2016-2017	<b>Xavier University of Louisiana Department of Mathematics</b> , New Orleans, LA <i>Student Mentor</i>
2014-2017	<b>Agrowtopia Farms</b> , New Orleans, LA <i>Farm Volunteer Coordinator</i>
June 2016	<b>Para El Mundo</b> , Mancora, Peru <i>Water Treatment Volunteer</i>

## Software & Language Proficiencies

### PROGRAMMING

Python, R, MATLAB, SQL, C++, Julia

### CLOUD COMPUTING

AWS Redshift, Lambda, SageMaker, EC2, S3

### SOFTWARE

ArcGIS, Tableau, PowerBI

### LANGUAGES

English (Fluent), Spanish (Fluent)