






FRANCISCO JOSÉ ACOSTA ESPINOSA

Data scientist, biologist

EDUCATION

- 2018-2019** ● **MSc in Data Sciences**
Instituto Tecnológico Autónomo de México  Mexico City
 - Development of machine learning models in R and Python
 - Projects for the analysis of genetic markers and prediction of stock values
- 2010-2012** ● **MSc in Marine Sciences**
King Abdullah University of Science and Technology  Saudi Arabia
 - Evolutionary models for marine microorganisms with bayesian methodologies
 - Thesis on the analysis of marine microbial communities
- 2002-2007** ● **Bachelor degree in Biology**
Universidad de las Américas Puebla  Puebla, Mexico
 - Thesis on the clinical detection of human influenza viruses
 - Graduated with *Cum Laude* honors

WORK EXPERIENCE

- 2019** ● **Data science internship**
Cinépolis  Mexico City
 - Development and implementation of predictive models for movie theater attendance at both global and local levels
- 2017-2018** ● **Editorial coordinator**
Publishing house La Hoja en Blanco  Mexico City
 - Content creation and editing
 - App and webpage development
- 2016-2018** ● **Content and style editor**
National Center for the Evaluation of Higher Education  Mexico City
 - Revision, editing and correction of standardized tests for the national teacher's evaluation
- 2013-2015** ● **Teaching assistant and graduate researcher**
University of Oklahoma  Norman, USA
 - Genomic and genetic research, focused on microorganisms
 - Development of statistical models for community analyses
- 2008-2010** ● **Department chief in the Direction of Medical Services**
Federal Secretariat of Public Security  Mexico City
 - Database administrator of the chronic viral diseases treatment program for federal prisons



I'm a data scientist with ample experience in statistical modeling and the biological sciences. My passion is to implement my knowledge and skills in complex, highly impactful projects.

CONTACT

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SKILLS

Development of mathematical models and multivariate statistical analyses

Implementation of predictive models using machine learning

Data mining

Big data, using hadoop, Spark and Zeppelin

Genomic and other specialized biological analyses

Development of software solutions with Python, R, Matlab and SQL

PUBLICATIONS AND CONGRESSES

- 2017 ● **Population genetic structure and fitness of *Daphnia pulicaria* across a pH gradient in three North American lakes**
Hydrobiologia, vol. 85, num. 1 [doi:10.1007/s10750-017-3316-y](https://doi.org/10.1007/s10750-017-3316-y)
Billy W Culver & Francisco Acosta
- 2015 ● **Conference Intra-individual heterogeneity in *Prymnesium parvum* ITS1 regions and its implications for the biogeography of a recent US invasion**
8th Symposium on Harmful Algae in the US
- 2015 ● **Dynamics of an experimental microbial invasion**
Proceedings of the National Academy of Sciences of the United States of America, vol. 112, num. 37 [doi:10.1073/pnas.1505204112](https://doi.org/10.1073/pnas.1505204112)
Francisco Acosta, Richard M Zamor, Fares Z Najjar, Bruce A Roe & K David Hambright
- 2013 ● **Diversity of picoeukaryotes at an oligotrophic site off the Northeastern Red Sea Coast**
Aquatic Biosystems, vol. 9, num. 1 [doi:10.1186/2046-9063-9-16](https://doi.org/10.1186/2046-9063-9-16)
Francisco Acosta, David K Ngugi & Ulrich Stingl
- 2012 ● **Poster Diversity of picoeukaryotes in the northern Red Sea**
14th Symposium of the International Society for Microbial Ecology

AWARDS

- 2016 ● **Second place in the student scientific publication competition of the International Society of Limnology**
Award for the article *Dynamics of an experimental microbial invasion*
- 2013 ● **University of Oklahoma Alumni Fellowship**
Fellowship for graduate studies
- 2002 ● **Jenkins Excellence Scholarship**
Scholarship for students with outstanding grades, given by the Mary Street Jenkins Foundation

REFERENCES

- **Dr. Benjamín Gutiérrez García**
Assistant professor at the Instituto Tecnológico Autónomo de México
benjamin.gutierrez@itam.mx
- **Lic. Juan Alberto Nava Cortez**
General director of the publishing house La Hoja en Blanco
albertonava.editor@gmail.com
- **Dr. K David Hambright**
Biology professor at the University of Oklahoma
dhambright@ou.edu