

# Nehemias Ulloa

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## CONTACT INFORMATION

☎ 661.428.5419  
🌐 [nulloa.github.io](https://github.com/nulloa)

✉ [nehemiasulloa@gmail.com](mailto:nehemiasulloa@gmail.com)  
📍 Chula Vista, CA

## POSITION

Biostatistician

## EDUCATION

**PhD in Statistics** **June 2019**

Iowa State University

*Thesis:* Bayesian Hierarchical Modeling and Analysis for Disease Outbreaks

*Advisor:* Dr. Jarad Niemi

- Compared the predictive capabilities of different Bayesian hierarchical models to forecast influenza outbreaks

**MS in Statistics**

**May 2017**

Iowa State University

*Creative Component:* Application of Polynomial Regression to Dyadic Data

*Advisor:* Dr. Fred Lorenz

- Data from a multigenerational study was used to tease out relationship dynamics in young adults

**BS in Mathematics**

**May 2013**

California State University, Bakersfield

## WORK EXPERIENCE

**Center for Veterinary Biologics (CVB), APHIS, USDA**

**July 2019 - Present**

Remote - Chula Vista, CA, Main Office - Ames, IA

**Senior Staff Statistician**

**Nov 2022 - Present**

- Evaluated experimental designs and resulting data from vaccine safety and efficacy trials
- Created statistical methods to evaluate new assay technologies
- Consulted with scientists to provide statistical advice on their projects (study design and analysis)
- Acted as supervisor & trained junior staff on statistical procedure
- Communicated results via written reports and oral presentations to internal and external clients
- Worked with IT to implement Shiny applications and the purchase of a Shiny server

**Staff Statistician**

**July 2019 - Nov 2022**

- Evaluated experimental designs and resulting data from vaccine safety and efficacy trials
- Managed multiple projects related to statistical consultation for scientist and researchers
- Provided statistical advice on sound study design to regulators for new regulations
- Communicated findings both in writing and orally to scientists

**Iowa Monarch Conservation Consortium**

**Jan 2019 - June 2019**

Ames, IA

**Research Assistant**

- Maintained and cleaned datasets for a R package
- Created scripts to automatically create figures and tables for grant reports

**After, Inc.**

**May 2018 - Dec 2018**

Norwalk, Connecticut

**R Shiny Developer Intern**

- Maintained and developed over 100 client reports with R Shiny
- Created and improved reporting templates to standardize reports across clients
- Researched new features for Shiny applications and documents

**Iowa State University**

**Aug 2013 - May 2018; Jan 2019 - June 2019**

Ames, IA

**Instructor/Teaching Assistant**

- Taught introductory statistics both in person and online
- Ran labs and graded for both undergraduate and graduate courses
- Held office hours to help students with a one-on-one emphasis

UNDERGRADUATE RESEARCH EXPERIENCE	<b>CREST(NSF)</b> California State University, Bakersfield <ul style="list-style-type: none"> <li>Investigated methods of fitting a penalized broken cubic spline and compared using AIC, AICcorr, BIC, CV, and GCV criteria's to the RSE</li> </ul>	<b>June 2012 - June 2013</b>
	<b>Interdisciplinary Program in High Performance Computing,</b> University of Maryland, Baltimore County <ul style="list-style-type: none"> <li>Completed Math 447: Introduction to Parallel Computing</li> <li>Collaborated with the Department of Natural Resources of Maryland to identify trouble areas of the Chesapeake Bay using different statistical methods and ranking systems.</li> </ul>	<b>Summer 2012</b>
VETERINARY SERVICES MEMORANDA (VSM)	<b>VSM 800.110:</b> Label Warnings Concerning Bovine Rhinotracheitis Vaccine, Modified Live Virus, and Bovine Virus Diarrhea Vaccine, Modified Live Virus, for Pregnant Cows or Calves Nursing Pregnant Cows  <b>VSM 800.124:</b> Guidelines for Potency Specifications of Biological Products Administered to Animals	
PUBLICATIONS	Eduardo L. Montoya, Nehemias Ulloa, and Victoria Miller. (2014) A Simulation Study Comparing Knot Selection Methods With Equally Spaced Knots in a Penalized Regression Spline. <i>International Journal of Statistics and Probability</i> , v.3, n.3, p. p96. ( <a href="#">URL</a> )  Rosemary K. Le, Christopher V. Rackauckas, Anne S. Ross, and Nehemias Ulloa. (2013) Assessment of Statistical Methods for Water Quality Monitoring in Maryland's Tidal Waterways. <i>SIAM Undergraduate Research Online (SIURO)</i> , vol. 6. ( <a href="#">URL</a> )	
AWARDS	<b>Center for Veterinary Biologics (CVB), APHIS, USDA</b> <ul style="list-style-type: none"> <li>Individual Cash Award NRB (Not Ratings Based)</li> <li>Individual Cash Award NRB (Not Ratings Based)</li> <li>Individual Cash Award NRB (Not Ratings Based)</li> </ul> <b>Iowa State University</b> <ul style="list-style-type: none"> <li>Alliance for Graduate Education and the Professoriate Fellowship</li> </ul>	Sep 2021 Sep 2021 Aug 2023   Aug 2013 - June 2018
PRESENTATIONS	<b>JSM:</b> Joint Statistical Meeting Baltimore, MD <ul style="list-style-type: none"> <li>Contributed Poster Presentations: Social Statistics Section - An Application of Polynomial Regression to Dyadic Data</li> </ul> <b>JSM:</b> Joint Statistical Meeting Vancouver, BC, CA <ul style="list-style-type: none"> <li>Bayesian Generalized Linear Models for Medicine — Contributed Talk - Bayesian Hierarchical Models and Influenza Modeling</li> </ul> <b>CDC:</b> Flusight Annual Conference Atlanta, GA <ul style="list-style-type: none"> <li>Bayesian Hierarchical Models and Influenza Modeling</li> </ul>	<b>Aug 2017</b>   <b>Aug 2018</b>   <b>Sep 2018</b>
ACTIVITIES	<b>STAT-ers:</b> Statistics graduate student organization Iowa State University <ul style="list-style-type: none"> <li>Vice President</li> <li>President</li> </ul> <b>StatCom:</b> Statistics in the Community Iowa State University	<b>Aug 2013 - May 2019</b>  <b>2015 - 2016</b> <b>2016 - 2017</b>  <b>Aug 2015 - May 2019</b>

- Ran statistics station at Meeker Elementary’s Science Night
- Helped a non-profit with data clean-up and summary statistics

**Meeker Elementary**  
 Ames, IA

2021-2022

- Help facilitate game nights for the community
- Helped run the walk-a-thon weekly events for the school children

**King Chavez High School**  
 San Diego, CA

2025

- Presented to various math course about the field of statistics and job paths

TECHNICAL  
 SKILLS

**Programming:** R, SAS, C++, SPSS, MPLUS, Git, SQL,  $\text{\LaTeX}$   
**Statistical Computing:** Stan, JAGS, Shiny, JMP

PROFESSIONAL  
 MEMBERSHIPS

American Statistical Association

LANGUAGES

English, Spanish