Berenice Venegas Cotero

DevOps Engineer - AWS Developer Associate certified
Interested in building distributed system in the cloud,
reliable, scalable and fully automated.
Eager to work on a challenging project

Skills

Cloud	AWS: Networking, Security, DB, ECS, Autoscaling, ELB, Lambda
DevOps	CloudFormation, Terraform, Consul, Docker,
Automation	Atlas, Vault, Rspec/Serverspec, TestKitchen, Chef, unit testing
CI/CD	Git, CircleCI, Jenkins
Scripting	BASH, PYTHON, RUBY
Other	Ansible, C++, JAVASCRIPT, R

Experience

12/2016–Present **DevOps Engineer**, CAPITAL ONE, Willmington, DE.
Created tools, and templates to provision infrastructure and services in AWS using fully automated CICD pipelines.
- These tools were designed to be customizable for the use of diverse teams in the corporation.
- Blue/green deployment.
- Creation of infrastructure and CICD pipeline for the migration of on-premise databases.

2015–11/2016 **AWS consultant**, Philadelphia, PA.
Created reliable, scalable and fully automated AWS infrastructure as code using Terraform. Special attention to following best practices.
- HPC cluster to run on demand CHARM simulations in AWS.
- Migration of WebSites to AWS: WordPress and Hugo.

2011–2015 **Data Scientist**, TEMPLE UNIVERSITY, Philadelphia, PA.
- Applied multivariate analysis and statistical inference to correlate lipid profile samples with pathologies.
- Applied Bayesian statistics in proteomic and lipidomic profiles to find patterns that would predict anomalies associated with pathologies.

2009–2011 **Associate Scientist**, TEMPLE UNIVERSITY SCHOOL OF MEDICINE, Philadelphia, PA.
- Produced liposomal nano-particle that efficiently controlled drug leakage.
- Manipulated surface characteristics of nano-particle.
- Developed a simulations in R to predict surface distribution and diffusion of lipids.

(267) 584 8564 • *berenice@cotero.org* • *blog.cotero.org*
github: clamorisse

2006–2009 **Associate Scientist**, Temple University College of Engineering, Philadelphia, PA.

- Produced a targeted delivered liposomal nano-particle for mammary cancer tumors.
- Performed pharmacological analysis to calculate circulation and particle retention times.
- Created a custom image analysis to transform 2D fluorescence images of tumors into the 3D tumor/organ fluoresce source to determine actual dye concentration.

Postdoctoral Residences

2003–2006 **Lipid lateral distribution in model membranes**, Temple University School of Medicine, Philadelphia, PA.

- Established a standardized method to detect regularly distributed lipids in model membranes.
- Characterized the critical factors that will affect their detection.
- Utilized custom algorithms to performed statistical data analysis.
- Developed a Monte Carlo simulation in C++ to validate the experimental results.

2003 **Improve patch-clamp infrastructure**, Temple University School of Medicine, Philadelphia, PA.

- Implemented a brand new setting to cut costs and enhance efficiency of a patch-clamp circuitry. The goal was to reduce the noise level and be able to detect changes of 2pAmpers accurately.

Education

1997–2003 **Ph.D. Biophysics**, *Universidad Autónoma del Estado de Morelos*, Mexico, Awarded with Honors.

- Recorded single channel of antimycotic AmB using patch-clamp electrophysiology.
- Determined the conditions for maximal appearance of AmB channels.
- Developed an algorithms and coded in C++ to find the different levels of currents and open time intervals of the channels.
- Describe the function of AmB channels as function of membrane properties using statistical analysis.

1991–1997 **Physics–Astronomy**, *Universidad Autónoma de Baja California*, Mexico.

- Awarded the "Early start in research fellowship" for the project: Dynamical simulations to determine the trajectory memory length in n-body interactions.
- Performed numerical simulations in C++.

Awards and Certifications

2016 Diversity Fellowship – DockerCon

2016 AWS – Developer Associate

Presentations

10/2016 **Presenter**, *Automation of Data Analysis in AWS. DevOps Days Philadelphia 2016*.
https://www.youtube.com/watch?v=XMjxyNLsl-o

1998-present **Presenter**, *Physics and Biophysics*.
National and International Meetings