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

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

2015-Present **AWS consultant**, Philadelphia.

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.
- o Migration of WebSites to AWS: WordPress and Hugo.

2011–2015 Data Scientist, Temple University, Philadelphia.

- o Applied multivariate analysis and statistical inference to correlate lipid profile samples with pathologies.
- o 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.

- o Produced liposomal nano-particle that efficiently controlled drug leakage.
- Manipulated surface characteristics of nano-particle.
- o Developed a simulations in R to predict surface distribution and diffusion of lipids.

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

- o Produced a targeted delivered liposomal nano-particle for mammary cancer tumors.
- o Performed pharmacological analysis to calculate circulation and particle retention times.
- o 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.
 - Established a standardized method to detect regularly distributed lipids in model membranes
 - o 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.
 - o 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.
 - o Recorded single channel of antimycotic AmB using patch-clamp electrophysiology.
 - o Determined the conditions for maximal appearance of AmB channels.
 - \circ 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

1998-present **Presenter**, *Physics and Biophysics*.

National and International Meetings

Languages

Spanish Mothertongue

English Proficient

Portuguese Intermediate

French Basic