

CARLYN LEE

carlyn.lee@gmail.com

EXPERIENCE

Jet Propulsion Laboratory, California Institute of Technology

August 2012 - present

Applications Software Engineer

Pasadena, CA

- Full web stack development for deep space telecom planning tools. Spacecraft, planetary, camera-matrix, and events analysis using C/C++, link analysis models using Java & nodejs. UX development for scheduling telecom links with Liferay portlet & Drupal development, data visualization with D3 & WebGL.
- Python implementation of Markov model for estimating bandwidth requirements in Deep Space Network simulations. Modeling of communications traffic flow for human exploration of Mars & Moon.
- Using AWS Redshift implemented data warehouse and plots from signals recorded on open loop receiver for Cassini Spacecraft during 2004-2015. Investigation of atmospheric losses for Ka-band links.

Spectral Imaging Laboratory

November 2011 - present

Consultant

Pasadena, CA

- Post-processing algorithm to correct for hardware inconsistencies in prototype camera.
- Application of super resolution algorithms to ray-traced simulations of images captured with artificial compound eyes. Using Matlab and openCV, improved resolution of images degraded with noise models.
- Mathematical modeling of visual acuity for multiple apertures on curved surface. Implementation of neural networks to improve angular resolution of a point light source.

Golfstream

September 2015 - March 2016

Consultant

Los Angeles, CA

- REST Web API for gameplay, user accounts, & game statistics for virtual golf simulator.
- Implementation of server infrastructure, media delivery, & user interfaces. Facilitate testing & game demonstrations to improve user experience.

California State University, Fullerton

December 2009 - August 2012

Research Assistant & Intern

Fullerton, CA

- Created framework to improve run-time efficiency & accuracy of cancer detection using eigen decomposition of DNA microarray data with large feature set.
- Binding site discovery in heat-shock proteins with C/C++ implementation of self-organizing maps.
- Delivered scheduling tool for library resources using .NET framework. C# student web application, VB.NET admin configuration tool. Database design & implementation using SQL Server & stored procedures.

VOLUNTEER & PROFESSIONAL AFFILIATIONS

2015 - present Interplanetary Small Satellite Conference Organizing Committee.

2016 - present Caltech Alpine Club Website Administrator

2010 - 2012 Vice-President of Association for Computing Machinery, CSU Fullerton.

AWARDS & HONORS

2015 3rd place Topcoder Open Finals API Hackathon.

2013 1st place Biotech Track, 15th Annual IEEE Biomedical Engineering Biotech Contest.

2012 Anita Borg scholarship, CSU Program for Education & Research in Biotechnology Student Travel Grant, Orange County Engineering Council Outstanding Engineering Student Award.

EDUCATION

California State University, Fullerton

M.S. in Computer Science

August 2012

B.S. in Computer Science, Minor in Mathematics

July 2011