CARLYN LEE

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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.
- Radio science operator for Cassini Spacecraft. Investigation of atmospheric losses for 32GHz radio communications recorded on Deep Space Network open & closed loop receivers. Using AWS Redshift implemented data warehouse and plots for radio science data from Cassini Spacecraft during 2004-2015.

Spectral Imaging Laboratory November 2011 - present
Consultant *Pasadena, CA*

- Post-processing algorithm to correct for manufacturing inconsistencies in prototype of artificial compound eye.
- 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.
- 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*

- Designed and implemented 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*