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 and mission planning tools.
- Analysis of spacecraft, planetary, instrument, camera-matrix, and events using C/C++. Java and nodejs implementations of communication link analysis based on models described literature.
- Developed telecom scheduling GUIs with Liferay and Drupal. Visualization with D3 and WebGL.
- Python implementation of Markov model to estimate bandwidth requirements in Deep Space Network simulations. Improved bandwidth costs from prior method.

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

- Implemented post-processing algorithm to correct for hardware inconsistensies in prototype camera.
- Applied 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. Implemented neural networks to improve angular resolution of a point light source.

California State University, Fullerton December 2009 - Aug 2012
Research Assistant & Intern *Fullerton, CA*

- Created framework to improve run-time efficiency and 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.
- Developed scheduling tool for library resources using .NET framework. C# student web application, VB.NET admin configuration tool.
- Database design and implementation using SQL Server and stored procedures.

VOLUNTEER & PROFESSIONAL AFFILIATIONS

June 2009 - present Mentor & participant in robotics competitions to contribute and advance learning of C/C++ with Lego Mindstorm, VEX, R-pi, Arduino.
2015 - present Interplanetary Small Satellite Conference Organizing Committee.
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 recepient, 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*