

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.
- Implemented Markov model for estimating bandwidth requirements in Deep Space Network simulations. Simulated communications traffic flow for human exploration of Mars and Moon.

Spectral Imaging Laboratory

November 2011 - present

Consultant

Pasadena, CA

- Implemented post-processing algorithm to correct for hardware inconsistencies 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 recipient, 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