Adrian Lam

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Summary

Data scientist with a passion toward extracting actionable information that can result in impactful changes in the lives of others.

Work Experience

The Data Incubator — June 2015 – Aug 2015

Generic Drug Prediction

- Munged the FDA drug database (90k rows) into SQL to pair brand name drugs with its generic name counterparts
- Models developed to predict date of generic drug launches and find time-series trends in generic drug launches with Python
- Results are capable of improving monthly sales forecast and predicting upcoming product introductions

MapReduce for Distributed Computing

- Used Hadoop MapReduce to calculate Shannon entropy of English and Thai language from a 1GB portion of Wikipedia with Amazon Web Services
- Analyzed Wikipedia link relationships by developing a network of links separated by one degree
- Apache Spark used to evaluate user post statistics and user reputations from a 5GB segment of StackOverflow

Graduate Student Researcher — Aug 2010 - Current

Patient Selection for Pacemakers

- Algorithm development for semi-automated segmentation, object recognition and co-registration on whole-heart image stacks (100MB/patient)
- Results can pre-select patients most likely to benefit from a pacemaker and help guide the implantation procedure.

Finding the Origins to Life

- Led a cross-disciplinary team of engineers to isolate precursors of self-replicating life using MATLAB
- Extraction of top 100 most relevant molecules from 32,000 images achieved in seconds with matrix factorization and image correlation techniques

Education

Ph.D. **Georgia Institute of Technology**
Bioengineering, Expected Dec 2015; GPA: 3.72
Minor: Signal and Image Processing

B.S. **University of California, Davis**
Biomedical Engineering, June 2010; GPA: 3.84

Selected Publications

Lam, A et al. “Performance of 3D, Navigator-Echo Gated, Contrast-Enhanced Magnetic Resonance Coronary Vein Imaging in Patients Undergoing CRT”. *J of Interv Card Electrophys* 41.2 (2014): 155-160

Lam, A. et al. Hemodynamic characterization of Aortic Valve Bypass Surgery using patient-specific computational models based on MRA and PCMR. *JCMR*, 14.1 (2012), 1-2.

Awards & Funding

2014	Winner of ATL Innovation Economy College Challenge
2012 – 2014	American Heart Association Pre-doctoral Fellowship
2013	Frontiers of Biomedical Imaging, Young Investigator Award

Technical Skills

Programming: MATLAB, Python, PostgreSQL, C++, Java
Software: Git, Unix, Hadoop MapReduce, Spark, D3