Will Wright

Contact Address: 2700 SW Hume Ct, Portland, OR 97219 Mobile: 530-760-9363 Email: william.everett.wright@gmail.com Website: https://will-wright.github.io GitHub: https://github.com/will-wright EDUCATION PhD Mathematics - University of California, Davis August 2019 Dissertation: A Rapid Eigenvalue Method for Noisy Phase Retrieval Specializations: • Large-scale numerical methods (e.g., sparse linear algebra) Machine learning / deep learning applications (e.g., CNNs in TensorFlow) Nonlinear and convex optimization 2015-2016 - SIAM Student Chapter President MS Applied Math - California State University, East Bay June 2013 2012 - Tracewell Scholarship 2011 - Sabharwal Scholarship MA Teaching - Concordia University, Portland OR June 2009 BS Political Science & Philosophy - Penn State Dec 2006 June - Dec 2016 Internship Researcher & Software Engineer - Apple o prototyped optimization algorithms o contributed performance-critical C++ code to team repository Professional Assistant Instructor - California State University, East Bay 2011 - 2013

Research

PROJECTS

EXPERIENCE

Image Segmentation

o developed a faster algorithm than the original algorithm

High School Teacher - Delta Academy, Antioch CA

Underwriter - Farmers Insurance, Portland OR

Middle School Teaching - Academy of Alameda, Alameda CA

o developed a *new sparse method* for adjacency matrix, requiring $\mathcal{O}(\text{pixels})$ ops vs $\mathcal{O}(\text{pixels}^2)$ in *scikit-image*





2010 - 2011

2009 - 2010

2007 - 2008

Signal/Image Processing: Phase Retrieval Denoising via Nonlinear Regression

- o developed adaptive hyperparameter selection method based on grid search strategy
- o decreased costs and runtime by 50-90% for a recent phase retrieval algorithm
- o demonstrated this algorithm is *more accurate* than a highly-cited *competitor algorithm*

LASSO Regularization, Quadratic Programming

- Qualifying exam proposal proved the equivalence of two recent methods (smoothing and Lagrangian)
- demonstrated this method (LQS, right) scales better than built-in MATLAB software

SOFTWARE SKILLS **Experienced** MATLAB, Python

Intermediate C++, Git, TensorFlow, scikit-learn, Julia

Interests

Running, brewing beer, boardgames, guitar, audiobooks and podcasts (e.g., the Expanse, Stormlight Archive, Freakonomics)