# Will Wright

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### **Profile**

Programmer and mathematician with 4 years experience creating machine learning models and developing algorithms for large, complex problems. Optimized several methods to boost performance (see projects below). Enjoys self-learning and deep dives to understand high- and low-level details of state-of-the-art methods. Seeking a role within a dynamic team environment to further develop skills, while learning how to deliver value driven results.

## **Highlights**

- Machine / Deep learning (<u>TensorFlow</u>)
- Autonomous systems
- Algorithm design

• Data science tools / environments

2019

- Large-scale numerical methods
- Sparse linear algebra

# **Selected Projects**

## **Image Segmentation**

- Developed <u>faster algorithm</u>, decreased runtime 80-95% for segmenting large images
- Designed <u>new sparse method</u> for adjacency matrix at O(pixels) ops vs  $O(pixels^2)$  ops in scikit

## Signal / Image Processing

- Modeled <u>adaptive hyperparameter method</u> based on <u>grid search strategy</u>
- Decreased low-level operations and runtime by 50-90%

PhD Mathematics - University of California, Davis

• Showed our algorithm is <u>better at denoising</u> than other algorithms (wflow, HIO)

### **LASSO** Regularization

- Qualifying exam proposal proved equivalence of two recent methods
- Demonstrated new method scales better than built-in MATLAB software

#### Education

<ul> <li>Dissertation: <u>An Improved Descent Method for Noisy Phase Retrieval</u></li> </ul>	
<ul> <li>SIAM Student Chapter President 2015-2016, Member 2013-2019</li> </ul>	
MS Applied Math - CSU, East Bay	2013
<ul> <li>2012 - Tracewell Scholarship</li> </ul>	
<ul> <li>2011 - Sabharwal Scholarship</li> </ul>	
MA Teaching - Concordia University, Portland OR	2009
BS Political Science and Philosophy - Penn State	2006
Professional Experience	
Researcher and Software Engineer - Apple (Internship)	2016
<ul> <li>Modeled various optimization methods to inform the direction of an autonomous systems project</li> </ul>	
Assistant Instructor - CSU, East Bay	2011 - 2013
Middle School Teacher - Academy of Alameda, Alameda CA	2010 - 2011
High School Teacher - Delta Academy, Antioch CA	2009 - 2010

### **Technical Skills**

- C++, Python, MATLAB, Git
- TensorFlow, Keras, scikit-learn

- Building ML & DL models
- Familiar with ResNet-50. BERT

#### **Interests**

Running, brewing beer, hiking, board games, guitar, audiobooks and podcasts