Will Wright

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Profile

Programmer and mathematician with 4 years experience in algorithms and machine learning. Developed algorithms for large, complex problems and optimized methods to boost performance (see projects below). Enjoys self-learning and deep dives to understand high- and low-level details. Seeking a role within a dynamic team environment to further develop skills and deliver value-driven results.

Highlights

- Autonomous systems
- Algorithm design
- Machine/Deep learning, <u>TensorFlow</u>
- Classification, pattern recognition
- Data science tools/environments

2019

• Large-scale, sparse methods

Selected Projects

Image Segmentation

- Developed <u>faster algorithm</u>, decreased runtime 80-95% for segmenting large images
- Designed sparse method for adjacency matrix superior to scikit method
 - \circ Requires O(pixel) low-level operations vs $O(pixels^2)$ for scikit-image/rag.py

Signal / Image Processing

- Created adaptive hyperparameter method based on grid search strategy
- 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

- Proved equivalence of two recent methods in <u>qualifying exam proposal</u>
- Designed algorithm which scales better than built-in MATLAB software
 - New algorithm scales appx. linearly with problem size

Dissertation: An Improved Descent Method for Noisy Phase Retrieval

Education

 SIAM Student Chapter President 2015-2016, Member 2013-2019 	
MS Applied Math - CSU, East Bay	2013
 2012 - Tracewell Scholarship 	
 2011 - Sabharwal Scholarship 	
MA Teaching - Concordia University, Portland OR	2009
BS Political Science and Philosophy - Penn State	2006
Professional Experience	
Researcher and Software Engineer - Apple (Internship)	2016
 Modeled optimization methods to inform the direction of an autonomous systems project 	
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