

# William Bokui Shen

[b0ku1.github.io](http://b0ku1.github.io)

[bshen88@stanford.edu](mailto:bshen88@stanford.edu)

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## EDUCATION

**Stanford University, School of Engineering**  
*Bachelor of Science in Computer Science with Honor*  
Specialization: Computer Vision

**Stanford, CA**  
*Class of 2018*  
GPA:4.0/4.0

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## ACADEMIC HONORS

- **Stanford University Computer Science Department Honor** (on-going): undergraduate honor thesis under advisory of Prof. Silvio Savarese and Prof. Leo Guibas.
  - **The Deans' Awards for Academic Achievement** nominated by Prof. Savarese (final results pending): given each year to between five and ten undergraduate students
  - **Frederick Emmons Terman Engineering Scholastic Award** (projected): awarded to top 5% engineering graduating class, GPA based
  - **Stanford CS106A Graphics Contest Champion** (Prof. Mehran Sahami, Autumn 2014): top 2 out of class of 600+ students
  - **Stanford Tau Beta Pi Engineering Society**
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## PUBLICATIONS:

- **Feedback Networks** *Amir R. Zamir\*, Te-Lin Wu\*, Lin Sun, William B. Shen, Jitendra Malik, Silvio Savarese*  
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017: Research on novel feedback network paradigm that offers advantages including early prediction, taxonomic compliance and curriculum-based learning over traditional feedforward counterpart. <http://feedbacknet.stanford.edu/>
  - **Visual Forecasting by Imitating Dynamics in Natural Sequences** *Kuo-Hao Zeng, William B. Shen, De-An Huang, Min Sun, Juan Carlos Niebles*  
IEEE International Conference on Computer Vision (**ICCV**), Spotlight, 2017: Research on a general framework for visual forecasting, which directly imitates visual sequences by formulating visual forecasting as an inverse reinforcement learning (IRL) problem.
  - **Taskonomy: Disentangling Task Transfer Learning** *Alexander Sax\*, William B. Shen\*, Amir R. Zamir\*, Leo Guibas, Jitendra Malik, Silvio Savarese*  
Under Review for IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2018: Research on visual task space's structure; leveraging task space structure to optimize supervision policy of a set of tasks, the models learned using recommended transfers achieve much better performance than the models trained from scratch and come close to models that are trained with an order of magnitude more data with full-supervision.  
My Technical Contribution: **4,000+** neural network models trained, **60,000+** lines of Python(Tensorflow), **~48,000** GPU hours
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## EXPERIENCE:

### Stanford Vision and Learning Lab

*Researcher*

**Stanford**

2016/8-Present

- Computer Vision Research. Contributed to two publications in top computer vision venues (CVPR2017, ICCV 2017); co-first-authored paper under review for CVPR 2018.
- Reviewer for CVPR 2018.
- Advisor: Prof. Silvio Savarese; Mentor: Postdoc. Amir R. Zamir

**Real-time Voice Call Transcription****Google-Project Fi***Software Engineering Intern*

6/2016-8/2016

- Implemented prototype for real-time voice call transcription for Google Telephony Platform
- Developed backend infrastructure that generated real-time call transcription; demo ready Javascript frontend
- Mentor: Madhusudhan R. Adupala

**Measuring Gradient Descend Batch Variance****Google-Google Brain***Software Engineering Intern*

8/2016-9/2016

- Worked with Alex Davies on evaluating gradient variance to assist step-size and step-direction decision

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**COMPUTER AND LANGUAGE SKILLS**

- Tensorflow, PyTorch, Torch, Python, Matlab, Java, C, C++

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**SELECTED COURSE HISTORY**

CS229 (Machine Learning), CS238 (Decision Making Under Uncertainty), CS261 (Optimization and Algorithmic Paradigms), CS231A (Computer Vision: from 3D reconstruction to recognition), CS231N (Convolutional Neural Networks for Visual Recognition), CS331B (Representation Learning in Computer Vision), CS267(Graph Algorithm)