

**Bram Wallace**  
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<https://sites.coecis.cornell.edu/bram/>

**Education**

**PhD in Applied Mathematics: Expected Graduation Dec. 2021  
Cornell University**

Research focus: Computer vision, self-supervised learning, transfer learning  
Projects:

- Current work: Contrastive Learning, Expert Model Selection
- Varied Domain Self-Supervised Learning (See **Publications**, ECCV)
- Single-Image 3D Reconstruction (See **Publications**, ICCV)
- Gaussian Processes (<https://github.com/cornellius-gp/gpytorch>)

**B.S. in Mathematical Sciences (2015)  
University of California, Santa Barbara (2013-2015)  
Attended College of San Mateo (2010-2013)**

- Grade Point Average: 4.0 (both colleges)
- Highest Honors awarded upon graduation
- Dean's Honors List for every undergraduate college term attended

**Publications**

- **Wallace & Hariharan: Extending and Analyzing Self-Supervised Learning Across Domains. ECCV 2020**
- **Wallace & Hariharan: Few-Shot Generalization for Single-Image 3D Reconstruction via Priors. ICCV 2019**
- **Wallace & Atzberger: Role of Diffusion of Fluorophore Orientation and Separation in Observed Shifts of FRET Efficiency. PLOS One: Vol. 12 Issue 5**

**Reviewer:** AAAI 2020, NeurIPS 2020

**Work Experience**

**Financial Engineering Intern (Bloomberg LP)**

*May 2018 – August 2018*

Developed unsupervised anomaly detection models for foreign currency exchange volatilities. This work was incorporated in Bloomberg production code.

**Data Science Intern (Vium)**

*April 2016 – March 2017*

Machine learning and software engineering with an emphasis on computer vision. Involved in conceptualization and development of biometrics for *in vivo* studies.

**Sports Research & Data Analyst (The Stats Zone)**

*April 2016 – August 2016*

Wrote sports analytics articles for online publication.

**Junior Specialist (UC Santa Barbara)**

*June 2015 – September 2015*

Summer research position. Designed and ran Monte Carlo simulations of Förster resonance energy transfer experiments. See **Publications**.

**Teaching Experience Teaching Assistant (Cornell)**

*August 2017 – May 2019*

Multivariable Calculus for Engineers (Fall 2017)  
Introduction to Data Science (Spring 2018, Spring 2019 Head TA)  
Basic Engineering Probability and Statistics (Fall 2018)

**Distinguished Active Learning Teaching Assistant Fellow**

*August 2018 – May 2019*

Designed and led supplementary teaching workshops for other graduate TAs.

**Software Skills**

- Python (6 years)
- Preferred research library: Pytorch

**Languages**

English (fluent), Spanish (conversational)