

# Wilson Gregory

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## EDUCATION:

**Johns Hopkins University**, Baltimore, MD. 3rd Year PhD Student, Applied Math and Statistics 2021-Present

- **Advisor:** Soledad Villar

**Rensselaer Polytechnic Institute (RPI)**, Troy, NY. B.S. in Computer Science and Mathematics 2018

- **GPA: 3.89**, Graduated *Magna Cum Laude*

## PUBLICATIONS:

\* indicates equal contribution

### **Preprints**

- **MarkerMap: nonlinear marker selection for single-cell studies**, N. Sarwar\*, W. Gregory\*, G.A. Kevrekidis\*, S. Villar, B. Dumitrescu, [arXiv:2207.14106](https://arxiv.org/abs/2207.14106)
- **GeometricImageNet: Extending convolutional neural networks to vector and tensor images**, W. Gregory, D.W. Hogg, B. Blum-Smith, M.T. Arias, K.W.K. Wong, S. Villar, [arXiv:2305.12585](https://arxiv.org/abs/2305.12585)

## INVITED TALKS AND WORKSHOPS:

- **AMS Special Session on Harmonic Analysis and its Applications to Signals and Information III**, AMS Spring Sectional Meeting 2023
- **Machine Learning for Science: Mathematics at the Interface of Data-driven and Mechanistic Modelling**, Mathematisches Forschungsinstitut Oberwolfach Workshop 2324

## GRANTS AND AWARDS:

- **US Junior Oberwolfach Fellow**, Travel Award €910
- **RPI IDEA Datathon 2018**, First Place Team \$1500
- **RPI IDEA Datathon 2017**, Honorable Mention Team \$500

## PROFESSIONAL EXPERIENCE:

Cut+Dry, San Francisco, CA

**Senior Software Engineer**

2020-2021

**Software Engineer**

2018-2020

- As the most senior engineer, led architecture discussions and implemented best practices
- Implemented pipeline to digitize restaurants' invoices from suppliers to track usage, pricing
- Employed React and Bootstrap to build modern, responsive restaurant ordering app
- Stood up Elasticsearch database on AWS to search 120,000+ products from over 14 suppliers

U.S. Department of Defense, MD

2017

**Computer Science Intern**

General Dynamics Mission Systems, Taunton, MA

2016

**Software Quality Assurance Intern**

- Worked closely with development team to identify, replicate, and log bugs in software
- Performed 70% of testing workload on kiosk software for military networking equipment

## SKILLS:

**Programming Languages:** Fluent in Python (JAX, Numpy, Pytorch), R, JavaScript, PHP, C/C++

**Data Science Skills:** Linear Regression, Gradient Descent, Neural Networks, Nearest Neighbor, PCA, SVM

**Experience with web development:** AWS, React, GraphQL, Apollo, Bootstrap