

# Thang Huynh

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## EDUCATION

### NEW YORK UNIVERSITY

Ph.D. in Mathematics  
June 2016 | New York, NY  
Advisor: Sinan Güntürk

### ST LAWRENCE UNIVERSITY

B.S. in Mathematics  
May 2010 | Canton, NY  
Summa Cum Laude

## SKILLS

### PROGRAMMING

- Python: NumPy, Pandas, scikit-learn, SciPy, seaborn, matplotlib
- Matlab
- Familiar with AWS, TensorFlow, and Keras

### SIGNAL PROCESSING

- Data compression
- Quantization
- Sparse recovery

### MACHINE LEARNING

- Dimensionality reduction
- Randomized algorithms
- Low rank matrix recovery

### DIGITAL MARKETING

Facebook Advertising:

- Data analysis
- Optimization and scaling
- Sales funnel

eCommerce:

- Product research
- A/B testing
- Conversion Rate Optimization

## COURSEWORK

- Deep Learning - Udacity Nanodegree
- Analytical Methods in Computer Science
- Randomized Algorithms
- Mathematical Signal Processing
- Metric Embeddings
- Numerical methods
- Applied Probability

## LINKS

LinkedIn: [linkedin.com/in/thanglehuynh](https://www.linkedin.com/in/thanglehuynh)

## EXPERIENCE

### UC SAN DIEGO | S.E.W. Visiting Assistant Professor

July 2016 - Present | La Jolla, CA | Mentor: Rayan Saab

- Research binary embedding problems in Machine Learning, and analog-to-digital conversion methods.
- Achieve the first binary embedding that applies fast Johnson-Lindenstrauss maps while preserving Euclidean distances. Resulting paper is accepted by a top applied math journal.
- Explore quantization methods for nearest neighbor search problems.
- Collaborate with electrical engineers to develop quantization methods for wireless communications.
- Implement several problems in signal processing and machine learning (e.g., compressed sensing, phase retrieval, etc.).
- Teach courses on data science, numerical linear algebra, differential equations, and calculus.

### UNIDONI LLC | Founder and Owner

May 2017 - Present | San Diego, CA

- Scale our ecommerce business from zero to \$1M revenue in eight months.
- Develop comprehensive strategies and marketing campaigns.
- Research the latest data science techniques for big data, and apply them to our product analytics methodologies.
- Analyze data on a daily basis using Facebook Analytics and Google Analytics to understand our consumer behavior, and to determine success or failure of our marketing campaigns.
- Manage a team of digital strategists, designers, and customer support specialists.
- Create, track, test, and analyze email marketing campaigns using Klaviyo.
- Be responsible for A/B testing and conversion rate optimization on marketing campaigns and paid landing pages.
- Execute across a variety of digital marketing channels, including but not limited to: Facebook, Instagram, Google, SEO, and email.

### NEW YORK UNIVERSITY | Research and Teaching Assistant

Sep 2011 - Dec 2015 | New York, NY

- Explored quantization theory and analog-to-digital conversion methods.
- Extended the noise-shaping quantization to random partial Fourier matrices supporting fast matrix-vector multiplication.
- Implemented ADC methods in the settings of sparse recovery and low rank matrix recovery by using spgl1 and cvx packages in MATLAB.
- Taught introductory undergraduate mathematics. Planned lessons and assignments, led discussion sections, graded quizzes and exams.

## HONORS, AND AWARDS

2010–2015	Henry MacCracken Fellowship, NYU	Full tuition and stipend
2010	Bates Award in Mathematics, SLU	For top student in math

## SELECTED PUBLICATION

- [1] Thang Huynh and Rayan Saab. Fast binary embeddings, and quantized compressed sensing with structured matrices. *Communications on Pure and Applied Mathematics*, To Appear, [arXiv:1801.08639](https://arxiv.org/abs/1801.08639).