# BENJAMIN LEINWAND

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## EDUCATION

**University of North Carolina,** Chapel Hill, NC *August 2017 - Present*
*Ph.D. in Statistics*
Advisors: Vladas Pipiras, Guorong Wu

**Various CUNY Colleges,** New York, NY *June - December 2016*
*Non-Degree Student*

**Cornell University,** Ithaca, NY *August 2009 - June 2013*
*Master's (MPS) in Applied Statistics*
*Bachelor of Arts, Double Major in Statistical Science and Economics*

## PUBLISHED PAPERS

"Two sample tests for high-dimensional autocovariances." (with C. Baek, K. Gates and V. Pipiras), *Computational Statistics & Data Analysis* (2020): 107067

## CONFERENCE PAPERS

"Characterizing Frequency-Selective Network Vulnerability For Alzheimers Disease By Identifying Critical Harmonic Patterns" (with V. Pipiras and G. Wu)
*IEEE International Symposium on Biomedical Imaging* *April 2020*

## PREPRINTS

"Detecting functional connectivity changes in fMRI data" (with C. Baek, M. Gampe, J. Hopfinger, K. Gates and V. Pipiras)

## RESEARCH INTERESTS

Networks evolving over time
Dense weighted networks
Machine Learning
Applications to: Neuroscience, Urban Data, Economics/Finance, Sports

## WORK EXPERIENCE

**Oliver Wyman,** New York NY and several other locations *October 2013 - June 2016*
*Senior Consultant*
Worked on 11 projects in a wide variety of industries and capacities, with a consistent emphasis on advanced quantitative analysis and clear communication of complex concepts

Selected Project Experience

- **Canada Mortgage and Housing Corporation** — Securitization economic capital model
  - Built a Monte Carlo model in Matlab projecting losses in various macroeconomic scenarios
  - Included several potential exposure types, enabling a unified organizational view of risk
- **PNC** — Stress testing loss forecasting model for home equity portfolio

  - Designed hazard models of risk in SAS based on borrower traits and macroeconomic conditions
  - Integrated prepayment, default, exposure at default and loss given default models
- **Spirit AeroSystems** — Pricing strategy
  - Optimized part pricing using maximum-likelihood estimation to calculate price elasticities
  - Tailored pricing strategy to account for competitor prices and market volume
- **The Clearing House** — "Do Bond Spreads Show Evidence of Too Big to Fail Effects?"
  - Contributed to a white paper by calculating Mertons distance to default, a measure of default risk
  - Sourced and manipulated data, and solved nonlinear equations in R
- **Webster Bank** — Performance management
  - Implemented a new incentive system that aligns bonuses with value produced for the bank
  - Piloted regions saw 24% increase in sales/FTE on a YOY basis compared to 4% elsewhere

**First Manhattan Consulting Group** New York, NY *June - August 2012*
*Summer Analyst*
- Wrote C# program to parse mailing addresses, reducing process time by 80% and improving accuracy
- Measured effectiveness of ad campaigns by identifying mail recipients who subsequently opened accounts
- Changed certain metrics reported to clients to enhance the clarity and consistency of results

**Cornell Venture Capital** Ithaca, NY *February 2011 - May 2012*
*Project Manager & Marketing Officer*
Led teams that completed projects for:
- Clearstone Venture Partners exploring the evolving media landscape
- Fynanz - a DFJ Gotham portfolio company focused on private student loans
- Cayuga Venture Fund researching medical device manufacturers

**The Nielsen Company The Modeling Group** Wilton, CT *June - August 2011*
*Intern*
- Conducted quantitative analysis for pilot project incorporating internet buzz into Marketing Mix Models
- Created PowerPoint presentations displaying the results and findings from MMMs
- Generated and formatted advertising and sales data files for use in modeling

**Basic Souvenir** Brooklyn, NY *August 2008*
*Assistant Manager at Sweatshirt Manufacturing Company*
- Helped grow business from empty space to fully operational, printing $\sim$200 sweatshirts per day
- Organized business site by configuring inventory, machinery, and production areas
- Trained new employee in printing and packaging protocols

## TEACHING

**Interdisciplinary Studies 290:** Data Science for COVID-19 (Instructional Assistant) *Fall 2020*
**STOR 155:** Data Models and Inference *Spring 2020*
**STOR 455:** Methods of Data Analysis (Instructional Assistant) *Fall 2018*
**STOR 155:** Data Models and Inference (Instructional Assistant) *Fall 2017- Spring 2018*

## SERVICE

**UNC Department of Statistics & Operations Research** *August 2019 - Present*
*Graduate Student Liaison*
- Established and edited student run website with information for current and prospective students
- Conducted survey of STOR graduate students for ways to update the graduate programs
  - Led to department reorganizing program structure and first year courses
- Organized first STOR Faculty Roundtable and wrote all questions for faculty

- Spoke to students, faculty, and alumni about improving the graduate student experience
  - Compiled instructor feedback resulting in a new graduate level course in Effective Pedagogy
  - Persuaded faculty to allow a rotating student to speak before each faculty meeting
  - Started monthly "tea time" event allowing students and faculty to mingle in an informal setting
- Elected as senator for STOR Department in the Graduate and Professional Student Federation
  - Hosted a town hall to inform students about resources available to them
- Founding president of BIOSTOR, an organization created to facilitate camaraderie between the STOR Department and the Biostatistics Department including joint student seminars, hikes, and happy hours

**UNC Department of Statistics & Operations Research** *January - March 2019, January - February 2020*
*Visit Day Coordinator*

- Managed logistics for finding visitors lodging and transportation
- Assisted in planning visit day activities
- Advised accepted students about visiting UNC and choosing a graduate program

**Reach the World** Volunteer Editor *February - May 2014*

## AWARDS

**ISBI Travel Grant** from the US National Institutes of Health, National Institute of Biomedical Imaging and Bioengineering, and National Cancer Institute *April 2020*
**Community Prize** for naming a non-profit focusing on gender equity in architecture *October 2013*
**Best Thesis Project** in Master's Program for analyzing performance on e-learning tasks *May 2013*
**Graduated Magna Cum Laude** in Statistical Science *January 2013*
**Graduated with Distinction in all Subjects** *January 2013*
**Omicron Delta Epsilon**, International Honors Society in Economics *March 2012*

## SKILLS

**Expert:** R, Excel
**Proficient:** LaTeX, MATLAB
**Experience with/Forgotten:** Python, SAS, SQL, C#, VBA