Nathan Lally

AVP: Data Science

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Experience

Data Science & Statistics

- **AVP Data Science, HSB (Munich Re Group)**, November 2020 - Present ««««< HEAD
  - Lead a team of data scientists on projects ranging from IoT sensor analytics to analysis of HSB's extensive inspection & engineering services data - we extract insights to support our current lineup of insurance products, but more importantly, to help develop new insurance and innovative risk management products for our clients
  - Work with business partners in various organizations to develop and deliver client-facing analytics products and services.
  - Leading efforts to modernize HSB's data science technology stack, MLOps practices and model deployment
  - Established an ongoing research agreement between HSB and The University of Connecticut's departments of Statistics and Computer Science focusing on IoT analytics; deploying HSB's first large scale machine learning system for IoT in production which measures customer responses to alerting systems using causal ML
  - **Assist with the development of methods and models for HSB's insurance data science team**
  - Lead a team of data scientists on projects ranging from IoT sensor analytics, claims analytics, financial forecasting, pricing and more
  - Work with business partners in various organizations to develop and deliver client-facing analytics products and services
  - Leading efforts to modernize HSB's data science technology stack, MLOps practices and model deployment
  - Established an ongoing research agreement between HSB and The University of Connecticut's departments of Statistics and Computer Science focusing on IoT analytics; deploying HSB's first large scale machine learning system for IoT in production which measures customer responses to alerting systems using causal ML »»»> c91df4558f08896491b04e639799fd50fb5d1f1e
- **Senior Data Scientist, HSB (Munich Re Group)**, February 2018 - November 2020
  - Led junior data science talent on technical projects and managed interns
  - Developed core product pricing models
  - Performed IoT sensor data analysis and related insurance product pricing/development, including developing the pricing strategy for HSB's first monetized sensor product (freeze loss warranty)
  - Coordinated and delivered data science education at HSB
- **Engineering Statistician, Pratt & Whitney (UTC)**, April 2016 - February 2018
  - Performed engineering analysis with statistical/probabilistic models and provided predictive modeling and optimization support to P&W Aftermarket and Finance departments
- **Adjunct Professor of Biostatistics, University of Connecticut**, January 2017 - May 2017
  - Taught "Introduction to Biostatistics for Health Professionals (AH 3005/5005)" to a class of approximately 100 undergraduate and graduate students in statistics, mathematics, and allied health sciences
- **Associate Data Scientist, The Hartford Insurance Group**, May 2015 - March 2016
  - Led efforts to build customer retention, issue rate, and customer lifetime value models
- **Graduate Assistant, University of Connecticut**, August 2014 - May 2015
  - Fully funded GA researching statistical/machine learning methods to predict damages to electrical utility infrastructure
- **Actuarial & Data Science Internships, The Hartford Insurance Group**, May 2014 - August 2014, December 2014 - January 2015
  - Completed two internships in both actuarial (risk and profitability) and data science (personal lines auto) positions

Defense Contracting

- **Various Roles, General Dynamics Electric Boat**, 2008 - 2011
  - Worked in piping design, program planning and process engineering
  - Certified Lean Six Sigma Black Belt

Education

- **MS Mathematics, University of Connecticut**, 2015
  - Thesis: The Informative g-Prior vs. Common Reference Priors for Binomial Regression With an Application to Hurricane Electrical Utility Asset Damage Prediction
  - Awards: Google Student Poster Award (In honor of the best posters presented in the fields of Statistics and Probability at the 29th New England Statistical Symposium)
- **BA Mathematics/Statistics, University of Connecticut**, 2014
- **BA Political Science, University of Connecticut**, 2007
  - Study abroad in Chiapas, Mexico, 2006

Volunteering & Outreach

- **Vice President, New England Statistical Society (NESS)**, June 2020-Present
  - Vice President in charge of the NESS Education Committee
  - Reorganized the committee into four subcommittees focusing on short course development, youth outreach, scholarship funds and ethics in data science education
  - Partnered with the NextGen Committee to establish NESS' new consulting service
  - Co-led the effort to design and deliver the The New England Statistical Society Scholarships for Underrepresented Minorities in 2021
  - Serve on the 2022 New England Statistics Symposium 2022 Program Committee
    - Organizing sessions on ethics for data scientists and data science applications in insuretech
- **Council Member, New England Statistical Society (NESS)**, May 2017-June 2020
  - Served on the education committee coordinating the society's educational activities and outreach

Technology

- **Programming Languages & Modeling Frameworks**
  - R, Stan, Python, SQL, PyTorch
- **Tech**
  - Linux, Git, LaTeX, Markdown, Microsoft Azure Cloud Services, Databricks

Publications

- **A Custom Unsupervised Approach for Pipe-Freeze Online Anomaly Detection**, 2021 IEEE 7th World Forum on Internet of Things, 2021
- **Modern Methods for Insurance IBNR Reserve Estimation**, International Society for Business and Industrial Statistics (ISBIS) Blog Corner, 2019
- **Estimating Loss Reserves Using Hierarchical Bayesian Gaussian Process Regression with Input Warping**, Insurance: Mathematics and Economics, 2018 (link to pre-print version)
- **Predictive Modeling in Long-Term Care Insurance**, North American Actuarial Journal, 2016 (undergraduate thesis)

Languages

- English
- Spanish (conversational)