THOMAS DEVINE

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EDUCATION

CARNEGIE MELLON UNIVERSITY   **2018–2021**
M.S. IN ECONOMICS;
Award: $138,000, National Science Foundation GRFP for a research proposal in child adoption matching

UNIVERSITY OF NORTH DAKOTA   **2015–2018**
B.S. MATHEMATICS, MINOR IN STATISTICS; BA ECONOMICS; GPA 3.78
Awards: McNair Scholar; speaker at UND's Phi Beta Kappa induction ceremony

WORK AND RESEARCH EXPERIENCE

Carnegie Mellon University   **Summer 2020**
Master's Thesis   *Pittsburgh, PA*

· Using R & Stata, I used causal inference via a first differences approach to the adoption of Solar Panel (PV) installations of a neighbor's decision to install PV affects peers at the zip code-level using public Census & ACS data; this entailed webscraping, data cleaning, modeling, statistical inference, and more. This work relates to classic marketing studies of the installed based & extends to predictive lead scoring.

Carnegie Mellon University   **Jan. 2020–Present**
Teaching Assistant   *Pittsburgh, PA*

· (*Graduate*) Statistical Foundations for Business Analytics (46-883)x2; Forecasting Time Series Data (45-912)x2; Modern Data Management (45-881)x1; In 46-833 and 45-912, I answered questions in R and explained class concepts in statistics, econometrics, & machine learning. In 45-881, I answered questions on the design and implementation of relational databases (MySQL) & data preparation using Tableau Prep, joining and blending multiple data sources in Tableau, & a brief discussion of data management challenges in the big data era. (*Undergrad.*) Political Economy (73-332)x2; I graded & answered questions.

Topic Modeling with Machine Learning (project in progress)   **Feb. 2021–Present**

· Using R (tm, openNLP), I parse comedy monologues (stand-up specials) to build a recommendation application. I use LDA, LSA, and NMF to assess topics. I map/cluster specials, topics, and comedians to defined genres of comedy and to one another. I make a functional API to showcase the project.

CNA Financial   **June–August 2018**
Actuarial Intern - Long Term Care   *Chicago, IL*

· Using R, SAS, and Alteryx, I converted (SAS to Alteryx) a monthly 4-step process in that aggregates counts for incurred but not reported claims and terminated but not reported claims for the group and individual policies; I converted (SAS to R) a monthly close process that aggregates claim counts.

Carnegie Mellon University   **May–July 2017**
Undergraduate Researcher in Financial Math   *Pittsburgh, PA*

· Using R and Python, my team web-scraped put option prices into a gradient descent algorithm for chosen stocks on the DJIA and compared the efficiency of random sets of stocks to calculate error (SSE).

TECHNICAL AND ANALYTICAL SKILL SET

Skills   R, Java, Python, Matlab, SQL, LaTeX, Tableau, Stata, SAS, Alteryx, Spanish (Intermediate)
        IDEs: RStudio, Spyder, DBeaver, IntelliJ, Jupyter Notebook; Actuarial Exam P (01/2017)

LEADERSHIP ROLES

· **CMU Club: Actuarial Science**	**President**	**2018–2021**
· **UND Clubs: Chess, Actuarial Science, Political** (VP)	**President**x2, **VP**x1	**2016–2018**