SPENCER CARTER

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DIRECTOR/PRINCIPAL DATA SCIENTIST

Statistics and Data Science professional with 8 years of experience across the spectrum of statistical modeling and deep learning. Track record of success leading projects and proof of concepts, while developing internal data science practice. Comfortable communicating technical concepts to non-technical audiences, having taught concepts in Machine Learning and AI to Sr. Leaders

WORK EXPERIENCE

The Travelers Companies Inc. | Atlanta, GA   2013-Present
Sr. Director, Personal Insurance R&D (2018-Present)

Technically-focused director, leading development of models for customer behavior and NLP. Small team, supplemented with matrixed data scientists, data engineers, and developers

- Pitched and led development of the first internal model to serve "just in time" email treatments based on a customer's predicted behavior. Ongoing testing indicates significantly reduced follow-up calls in target population
- Led creation of USE-based semantic search and topic modeling on customer surveys. These two tools significantly accelerate the rate at which CX partners can understand and act on customer feedback
- Collaborated with enterprise team to develop MVP for call and chat summarization using RoBERTa
- Modernized internal uplift methodology for marketing, and wrote an internal Qini package
- Head instructor for Travelers internal machine/deep learning class and GLM class since 2017

Director, Claim Enterprise Medical Research (2017-2018) | Hartford, CT

Technically-focused director, led development of models for Worker's Compensation medical claims

- Pitched and developed project to identify deviating medical patterns from bills and claim notes
- Led model build for nation-wide Worker's Comp. initiative to stratify claim severity and assign alternative workflows using XGBoost. New workflow reduces expense by $9MM/year
- Championed the increased use of text mining at Travelers by teaching others and improving three existing models, adding 10+% lift in fit metrics for each
- Hosted modeling competition with 52 competitors. Developed submission and leaderboard web services

Previously **Manager** (2016-2017), **Associate** (2015-2016), **Sr. Consultant** (2014-2015), **Consultant** (2013-2014)

Candoo LLC | Hartford, CT   2017-2018
Co-founder & Chief Analytics Officer
Startup side project (above board with Travelers Legal) that briefly went full time. Learned a lot about drones and startups, and built computer vision MVPs. Founder life wasn't a great personal fit; made an exit as the company pivoted.

EDUCATION

University of Alabama | Tuscaloosa, AL
Master of Science in Applied Statistics   Graduated August 2013
GPA: 4.0/4.0
• Most Outstanding Masters Student in Applied Statistics

Bachelor of Science in Mathematics and Philosophy   Graduated May 2012
• Thesis: "What about These New Ability Hypotheses?"

SKILLS

Modeling
- Proficient: Statistical Modeling/Testing, Machine Learning, Deep Learning, Model Monitoring and Validation, NLP
- Familiar with: Uplift Modeling, Design of Experiments, Computer Vision

Programming
- Proficient: Python, SAS, SQL
- Familiar with: R, Shell scripting, Django, Flask and writing RESTful APIs
- Deep Learning Frameworks Keras, PyTorch, Tensorflow Vision API

Misc
- Familiar with AWS Sagemaker and Google Cloud ML Engine
- Familiar with Kanban and worked with corporate Agile

ADDITIONAL ACHIEVEMENTS

- Travelers Emerging Analytics Leaders Program Graduate 2020
- Travelers Data Science Leadership Development Program Graduate 2017
- Lead case development for Travers annual Actuarial Case Competition 2017
- InsurTech Hartford Hackathon Weekend 2017, 2nd place team