# ELLIOTT EVANS

## Data Scientist | Machine Learning Engineer

📞 443-676-7617　　@ evanselliott1@gmail.com　　📍 Chicago, IL　　🌐 elliottevans.github.io　　in linkedin.com/in/elliott-evans

## PROFILE

- Principal data scientist & certified TensorFlow developer building ML pipelines leveraging Keras, PySpark, TensorFlow, and scikit-learn
- 5+ years in industry applying machine learning to problems in finance, politics, education, and whatever challenge comes next

## EXPERIENCE

### Capital One　　Credit Card Fraud Data Science Team
Principal Data Scientist

📅 August 2021 – Present　　📍 Chicago, IL

- Development and experimental work on card transaction fraud models
- Researching applications of deep learning models in third-party fraud space
- Implemented tailored resourcing of kubernetes pods to halve ETL runtime
- Developed proof of concept for denoising autoencoder to simulate card data
- Implemented hyperparameter tuning for deep learning models
- Developed multiple kubeflow pipelines to run primary transaction fraud model

### Civis Analytics　　Political Applied Data Science Team
Staff Data Scientist

📅 December 2020 - May 2021　　📍 Chicago, IL

- Implemented and deployed multioutput, multi-layer perceptron with Monte Carlo dropout for issue modeling
  - Utilized `tf.keras` subclass API with custom loss function to incorporate missing values and class weighting
  - Improved accuracy and ROC AUC relative to legacy model
- Created modeling pipeline to run parallel TensorFlow estimators for chamber level resource allocation
- Managed one direct report, active on the political management team
- Collaborated with state-leg. team in DC and R&D team in NYC

### Civis Analytics　　Political Applied Data Science Team
Senior Data Scientist

📅 July 2018 - December 2020　　📍 Chicago, IL

- Made TF model to output person-matching scores for identity resolution
- Used Keras API to iterate on variational inference public opinion models
- Developed custom sklearn estimator for iterative imputation
- Optimized Bayesian election forecasting model in Stan for accuracy/speed

### US Census Bureau　　Education, Demographic, Geographic Estimates Branch
Survey Statistician Intern

📅 June 2017 – August 2017　　📍 Suitland, MD

- Analyzed Bayesian kriging on income-to-poverty ratios for public schools
- Found disclosure issues in spatially interpolated demographic estimates

### OptionsHouse by E*TRADE　　Business Intelligence Team
Junior Business Intelligence Analyst

📅 June 2015 – July 2016　　📍 Chicago, IL

- Created C5.0 decision tree model to forecast future user value
- Provided analysis on user trading behavior and customer segmentation
- Queried MySQL and PostgreSQL databases on millions of data points

## EDUCATION

### University of Michigan
MS, Applied Statistics

📅 Sep 2016 – Apr 2018　　📍 Ann Arbor, MI

- GPA: 4.0/4.0
- Outstanding First Year Masters Student Award
- Teaching Assistant, Introduction to Statistics
  - 3 labs (90 - 120 students total) per semester
  - TA Mentor responsible for onboarding new TAs

### Northwestern University
BA, Statistics
BA, Mathematics
Minor, Computer Science

📅 Sep 2011 – June 2015　　📍 Evanston, IL

- Major GPA (Statistics): 3.9/4.0
- *Honors Mathematics Program Participant*

## LICENSES & CERTIFICATIONS

- **TensorFlow Developer Certificate**
- DeepLearning.AI TensorFlow Developer Specialization
- Sequences, Time Series and Prediction
- Natural Language Processing in TensorFlow
- Convolutional Neural Networks in TensorFlow
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning
- End-to-End ML with TensorFlow on Google Cloud

## FAVORITE TOOLS

**Used Recently:**

Python ・ Keras ・ TensorFlow ・ PySpark ・ SQL ・ git ・ Docker ・ Kubeflow ・ Snowflake ・ S3 ・ Databricks ・ Jupyter ・ Argo ・ scikit-learn

**Used, but Less Recently:**

R ・ Stan ・ GCP ・ Amazon Redshift Spectrum

## FAVORITE PROJECTS

- Identified spatial patterns in high school graduation rates w/ Bayesian hierarchical spatial models
- Presidential election 2016 forecasts using public poll scraping and nearest-neighbor algorithms
- Measured value of pitch-framing in MLB using run expectancy matrices and Pythagorean expectation