

NLP FOR FINANCE CERTIFICATE

Program Description

Sifting through the wealth of unstructured data in today's world might feel like an impossible task. With a torrent of business reports, product descriptions, and countless other text-based data produced daily, humans alone can't hope to effectively analyze it all. That's where the power of AI and specifically natural language processing (NLP) comes in. NLP is a rapidly evolving field, with new applications constantly being unearthed. It's widely used in the world of finance for extracting meaningful insights from massive text datasets and aiding in activities like risk evaluation, portfolio construction, and competitive analysis.

In this certificate program, you'll gain a comprehensive understanding of NLP algorithms that can decipher and categorize vast amounts of text-based data. You'll begin with the basics, determining how to prepare and refine data for your very own NLP projects. The initial focus will be on the Latent Dirichlet Allocation (LDA) algorithm, a powerful tool for topic modeling in business scenarios.

As you progress, the courses will delve deeper into the intricacies of text pre-processing techniques such as stopwords, tokenization, and stemming/lemmatization. You'll gain hands-on experience fine-tuning LDA topic models to align with industry classification standards and further explore the Doc2Vec algorithm as an alternative approach to topic modeling.

Through a variety of practical assignments and activities, you'll strengthen your skill set in data manipulation, algorithm training, and model performance evaluation. You'll also have the chance to build investment portfolios based on the alignment of companies by business activity.

In addition to mastering these vital NLP tools, you'll discover how they can be utilized to draw meaningful industry-based insights from enormous amounts of unstructured data. By the end of the program, you'll be well equipped to leverage NLP for making informed, data-driven decisions in the ever-evolving financial markets.

In order to be successful in this program, students would benefit from a having sufficient English-language fluency, as some aspects of the data cleaning have relations to English. It is also useful to have a working knowledge of Python programming, but not a requirement as the coding is provided throughout the course with detailed instructions on how to use it.

The courses in this certificate program are required to be completed in the order that they appear.

Key Takeaways

- Prepare business data for natural language processing
- Map topic models to companies for activity-based portfolio construction, evaluating their relevance with respect to real-world investment portfolios
- Train a semantic modeling NLP algorithm to optimize model performance
- Tune hyperparameters to optimize LDA topic model performance

What You'll Earn

- NLP for Finance Certificate from Cornell's SC Johnson College of Business
- 64 Professional Development Hours (6.4 CEUs)

Who Should Enroll

- Financial analysts
- Quant finance investors
- Market analysts and business analysts
- Data scientists
- Software engineers

Total Investment

- 2 months to complete all the courses

How to Enroll

For more information on how to enroll, please visit NLP for Finance Certificate (<https://ecornell.cornell.edu/certificates/technology/nlp-for-finance/>).

Courses

Code	Title	Hours
eCornell JCB661	Preparing Data for Natural Language Processing	0
eCornell JCB662	Cleaning Text Data to Optimize Model Performance	0
eCornell JCB663	Tuning Your NLP Model for Market Relevance	0
eCornell JCB664	Alternative Approaches to Text Data Analysis for Investment	0