

# ANDREW D'SOUZA

Data Scientist – NLP/ML & Text Analytics

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## KEY HIGHLIGHTS

- 5 years using **Data Science** and **NLP** to help business owners understand customers, sales, marketing

## DATA SCIENCE & NLP STACK

- **Natural Language processing (NLP):** [Spacy, NLTK, Genim, Scrapy] text analytics, semantic parsing, relation extraction, classification, part of speech tagging, dependency parsing, named entity recognition, summarization, LDA, Word2Vec
- **Deep Learning:** [Tensorflow, Keras, Numpy, Pandas] Bi LSTM, CNN, BERT, ELMo
- **Machine Learning:** [Scikit-learn, Numpy, Pandas] clustering, classification, regression; k-means, support vector machines, random forests, PCA, linear and logistic regression
- **Visualization:** [Tableau, Matplotlib, Seaborn] GIS
- Database & Deployment: SQL, Git, Ubuntu, AWS, Digital Ocean

## EXPERIENCE

NNSIGHT ANALYTICS ~ TORONTO, ONTARIO, CANADA

NOV 2014 – PRESENT

### CO-FOUNDER : DATA SCIENTIST , NLP (NNSIGHTANALYTICS.COM)

As part of this analytics consultancy my role is to use Data Science and NLP on structured sales and marketing data and unstructured text to understand customers and make sales and marketing predictions for different industries. The goal is to offer sales, marketing and business direction to business owners using data and insights.

#### Duties:

- Use NLP, ML, DL and visualization to understand customer attributes, trends, segments, predictions
- Collect, explore and clean data from APIs, OCR documents, CRMs, web text, chats text
- Feed NLP analysis into machine learning and insight visualization stages
- Analyze customer segment, lifetime value, ROI, make recommendations and advise the client

#### Accomplishments – A variety of analytics initiatives using Data Science and NLP:

- Objective: (Legal sector) Used NLP to extract customer attributes, analyze sales data, predict ROI
  - Used NLP semantic parsing to extract and untangle chat details: people, circumstances, events
  - Identified high and low performing customer segments, predicted customer lifetime value
  - Advised the client about optimal marketing channel spending and ROI
- Objective: (Retail) voice of customer; used micro-sentiment to understand customer dissatisfaction
  - Performed word sense and sentiment analysis using NLP and ML on review text data
  - Uncovered X common buying factors and benchmarked Y% satisfaction versus competitors
  - Advised the client about underlying cohorts and changes required to their product messaging
- Objective: (SaaS) call center PoC; used call content to discover client's true needs, segments, ROI
  - Developed a new call center recording, transcription and analytics system to study sales calls
  - Identified linguistic sales triggers and needs for different customer segments
  - Developed and optimized performance KPIs for agent and campaign performance

CHATTERBOX PR & EVENTS FZ LLC ~ DUBAI, U.A.E.

APR 2011 – OCT 2014

**CO-FOUNDER: TECHNOLOGY MARKETING**

As part of this technology marketing, media and public relations consultancy:

- Obtained news coverage and ran marketing campaigns for large tech clients (Western Digital, ASUS)
- Grew the client's online social media audience using analytics and targeted content
- **Accomplishments:** Won media awards for client's products from consumer and industry media

TELEDYNE DALSA ~ WATERLOO, ONTARIO, CANADA

OCT 2005 – MAR 2011

**SALES ENGINEER AND KEY ACCOUNT MANAGER**

As part of this global leader in scientific, aerospace and industrial digital imaging technology, with clients included space agencies, defense contractors, industrial automation and healthcare.

- Owned end-to-end consultative pre-sales, sales and post-sales processes:
  - Built relationships by addressing client's technical/business problems with custom solutions
  - Technical needs assessment, capability presentations, demos, key product specifications
  - Guided integration testing and performance evaluation
  - Monitored internal product development milestones, delivery, installation, support
- Led an expanding sales territory and achieved progressively increasing annual sales targets:
  - Initially a Junior Sales Engineer; \$1.5M+ annual sales, Midwest US & Canada
  - Eventually a Regional Technical Key Account Manager; \$6M+ annual sales, US & Canada
- Advised, trained and enabled a network of sales representatives and distributors
- Compiled competitive market intelligence
- Secured cross-functional alignment and approval from executives, multiple engineering teams, legal, finance and operations, on key strategic projects

**Accomplishments:**

- Delivered industry talks and training to 100+ integrators and customers at workshops across Canada

GENNUM CORPORATION ~ BURLINGTON, ONTARIO, CANADA

MAY 2003 – AUG 2004

**ENGINEER, ANALOG CIRCUIT DESIGN AND TESTING**

Full time professional Engineering internship at leading broadcast video IC manufacturer:

- Designing high speed video processing circuits
- Used Cadence, PSpice, Verilog for Analog circuit design and simulations

**EDUCATION**

QUEEN'S UNIVERSITY ~ KINGSTON, ONTARIO, CANADA

2005

**BACHELOR OF APPLIED SCIENCE, ELECTRICAL ENGINEERING**

- Graduated with 1<sup>st</sup> Class honors
- Includes courses in computer science, linear algebra, calculus, statistics, hardware