

Spencer Hayes-Laverdière

Machine Learning Engineer

SUMMARY

Passionate machine learning engineer and data scientist with experience solving real-world problems in computer-vision, NLP, and finance. Currently leading the development and deployment of pricing and encoding models at a PropTech start-up.

CONTACT

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KEY SKILLS

- **Bilingual (English/Français)**
- **Data Engineering:**
 - Analytics
 - Visualization
 - Versioning
- **Big Data**
- **MLOps**
- **Explainable AI**
- **Computer Vision**
- **NLP**

TECHNICAL SKILLS

- **Tools:** Python, Java, C, FPGA, PostgreSQL, NoSQL, AWS, GCP, Git, DVC, Linux
- **Packages:** Scikit-Learn, NumPy, XGBoost, Pandas, NLTK, SHAP, TensorFlow/Keras, OpenCV, Statsmodels, Jupyter, Matplotlib
- **Statistics/Machine Learning:** Statistical Analysis, Linear/Logistic Regression, Clustering, Encoding/Decoding, CNNs, RNNs

PROFESSIONAL EXPERIENCE

Machine Learning Engineer/Data Scientist **2020-Current** [Squarefeet.ai](https://www.squarefeet.ai)

Automated Valuation Model

- Predicted sales prices of off market properties with **95% accuracy**, rivalling that of large US companies like Zillow
- Created and implemented three different data transformations features that together **increased model accuracy by 5%**
- Implemented an **explainable AI system** that showed how each input affected the final output

Nearest Neighbour Model

- Developed a model that could take as input a property and **find the most similar property** in our database
- The model was so effective that it was able to find similar properties even when there was an error in our data

Data & ML Pipelines

- Designed and assembled a complete ML pipeline that sped up model and dataset development
- Set up an MLFlow remote tracking server and remote data versioning store to **track and reproduce experiments**

Instructor

2018-2020

University of Ottawa

- Taught enrichment courses in Electrical & Computer Engineering
- Led workshops teaching engineering skills such as coding and 3D printing to people of all ages, including at-risk youth at community centres throughout Ottawa

EDUCATION

BASc Computer Engineering

University of Ottawa

Minor in Business & Entrepreneurship

CERTIFICATIONS

- **Machine Learning** - LinkedIn Skills Assessment
- **Python** - LinkedIn Skills Assessment