

Henry Vendittelli

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PROFESSIONAL EXPERIENCE

Empire Life Insurance

Sept 2024 – Dec 2024

Software Developer (Part-Time)

Kingston, ON

- Improved Empire Life's AODA compliance score to an all-time high of 97% by addressing 73 accessibility related tickets for Empire.ca using Drupal CMS and Pantheon.
- Worked with external agency Evolving Web to implement stable website fixes using WebOps workflows for efficient and reliable deployments to production.
- Created reports highlighting AODA compliance improvements with key metrics and remediation insights, presenting them to the CTO and other stakeholders to demonstrate alignment with accessibility goals.

Empire Life Insurance

May 2024 – Aug 2024

Software Developer Intern

Kingston, ON

- Released end-to-end features for a technology reporting tool that monitors the process of adopting new technologies using React, FastAPI, Firestore, Auth0, Github Actions, and Google Cloud Platform.
- Implemented Tanstack Query in the service layer to optimize data fetching, reducing page load time by 28% and decreasing server-side API load by 35%.
- Integrated Jira's REST API to the to automatically create and assign tickets reducing abandoned submissions.
- Wrote documentation and lead knowledge transfers with developers to integrate Jira REST API into other services.

360Insights

May 2023 – Aug 2023

Junior Data Scientist

Toronto, ON

- Implemented a generic time series forecasting model using AdaBoost Regressor to predict customer rebates from historical data.
- Fine-tuned models hyperparameters to achieve MAPE of 12% on time series data and deployed the pipeline to AWS.
- Created a web scraping tool using BeautifulSoup to collect call transcripts from non-exportable external service.
- Used NLP to preprocess data and K-Means clustering to model common issues from the call center to present to stakeholders.

EDUCATION

Queen's University

Sept 2021 - May 2025

Bachelor of Computing (Honours) - Specialization in Cognitive Science

Kingston, ON

LEADERSHIP AND CLUB INVOLVEMENT

Queen's Data Analytics Association (QDAA)

May 2024 – May 2025

Project Manager

Kingston, ON

- Leading a team of 5 on an autonomous car project using CARLA to explore Deep Learning techniques using LiDAR and CV.

PROJECTS

Caselaw Access Project Retrieval-Augmented Generation | *Python, OpenAI API, Pinecone, Langchain*

- Created a RAG model to improve LLM context using the Harvard Library Innovation Lab's Caselaw Access Project.
- The user can specify specific states/volumes from the Caselaw Access Project, that creates vector embeddings in Pinecone for GPT-4o mini to index, improving the context of historical verdicts that shape modern law.

Album Art Scanner (SpinStash) | *Python, Flask, OpenCV, Gemini API, Spotify API, MongoDB*

- Designed a tool to track my collection of 417 CDs by creating an album art scanner using OpenCV and the Google Cloud Vision API to scan for web entities, then using the results to query the Spotify API for relevant album information.

Portfolio Website (henryvendittelli.com) | *Next.js, TypeScript, Tailwind CSS, Vercel*

- Designed and iterated on my portfolio website using Next.js to achieve perfect lighthouse scores for performance, accessibility, best practices and SEO.

Reddit Sentiment Analysis NLP (QMIND) | *Python, PyTorch, spaCy, NLTK, Pandas*

- Created NLP program trained on dataset of Reddit comments mapping to 1 of 27 emotions to analyze sentiment.
- Used tokenization, stop word removal, and lemmatization to preprocess data and fine tune ALBERT achieving 97% accuracy.

TECHNICAL SKILLS

Programming Languages:	Python, Java, C, JavaScript (TypeScript), Bash, SQL, HTML, CSS
Libraries/Frameworks:	React, Next.js, Tailwind CSS, Express.js, FastAPI, Flask, Node.js
Machine Learning & Data:	PyTorch, TensorFlow, scikit-learn, pandas, Numpy, MongoDB, Firestore
Development Tools:	Git, GitHub Actions, Docker, GCP, AWS, Pantheon, Terraform, Auth0, Linux, Vim