

Filip Stojanovic

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Experience:

Machine Learning Engineer, Voices **January 2022 - Present**

Database Engineering: Developed a new Business Intelligence data warehouse and ElasticSearch database to power Analytics dashboards and the Search API

ETL Pipelines and Automation: Built and improved ETL and data ingestion pipelines to update databases and migrated manual scripts into an automated process in the AWS Cloud

Search API Development: Led two major projects that re-built the poorly performing Search API and improved its performance, speed and maintainability

Model Deployment: Supported the deployment of several Machine Learning Models as well as the transfer of existing models to serverless APIs

Achievements:

- Created a new Business Intelligence data warehouse in Redshift and built a Matillion ETL pipeline that ingests data from various sources including: MySQL, DynamoDB, Salesforce and Google Drive into standardized tables and schemas with validation controls. This fixed many errors that caused the database to crash during updates and addressed pain points for the developers and analysts.
- Created a new and improved ElasticSearch database to power the Search API and the data ingestion and update pipelines in Logstash. Created custom template mappings and embeddings to support our text searching capabilities.
- Took various R and Python scripts that were being manually run on one developers computer and migrated them into the AWS Cloud as a scheduled jobs process
- Led two major Search Iterations that: upgraded a deprecated Search architecture to the newest ELK 8 Stack, Implemented A/B Testing capability, created the ability to boost users based on specific criteria, created an NLP text matching algorithm to improve performance and built search as you type functionality
- Supported in deploying the Pricing Recommendations model and migrating the JobMatch model as Serverless APIs using AWS SageMaker and Lambda

Data Scientist, Opta Information Intelligence **October 2019 - January 2022**

Machine Learning Model Development: Developed predictive models from start to end by: acquiring and cleaning data, engineering features, training and tuning models, validating predictions, and testing results.

Model Deployment: Took working models and deployed them into a production ready environment as serverless APIs to make real time predictions.

ETL Pipeline: Created automated pipelines that perform scheduled jobs to ingest data from multiple sources. Data is sent through validation and cleaning steps and uploaded into standardized database tables.

Presentations and Reports: Performed analysis using statistical techniques to create reports for clients, team members and supervisors. Demonstrated key metrics indicating performance and showcased graphs and visualisations to effectively communicate findings.

Achievements:

- Used XGBoost to develop Fire Risk and Smoke Alarm Models. They have grown to be utilized by many Municipal Fire Departments across Canada to inform their property inspection initiatives. The models are used in field inspections and generate a significant source of recurring income with most contracts renewed this year.
- Deployed Lot Size and Comparable Properties Models into production using AWS Sagemaker, Lambda and Docker. The models are accessible through APIs with serverless endpoints.
- Utilised Step Functions, Cloudwatch Events and Sagemaker Processing Jobs to build Pipelines for automated monthly ingestion of geographic property and demographic data from multiple sources into the datalake.
- Created a searchable Elastic Search database for automobile insurance data and automated ingestion pipeline from an external source with tens of millions of records.
- Created presentations and dashboards for the Fire Incident Model with graphs and visualisations generated with Matplotlib and Tableau and was responsible for presenting them to clients in meetings.

Personal Projects:

Movie Recommendation Engine: <https://movierecommender.live>

- Source Code: <https://github.com/FilipStojanovicski/movie-recommender-react-app>
- An interactive web application that provides Artificial Intelligence based movie recommendations based on a users inputted movie ratings
- Technical Stack: Flask, Express, React, MySQL, Surprise, Docker, Nginx

Free Stock Market: <http://freestockmarket.me>

- Source Code: https://github.com/FilipStojanovicski/free_stock_market
- A virtual stock trading brokerage web application that simulates the real stock market. Users buy and sell real stocks with their latest prices using virtual currency.
- Technical Stack: Flask, PostgreSQL, Docker, Nginx, Unicorn, cron, Alpaca API

Portfolio Website: <https://filipstojanovicski.github.io/>

- Source Code: <https://github.com/FilipStojanovicski/filipstojanovicski.github.io>
- A fully responsive portfolio website built in my creative style featuring a beautiful design and easy to use user interface.
- Technical Stack: HTML, CSS, JavaScript

Education:

University of Toronto - Bachelor of Science in Mathematics and Physics

Stanford University - Machine Learning Certification

Technical Proficiencies:

Languages: Python, Javascript, HTML, CSS, Regex

Databases: SQL (PostgreSQL, MySQL), Elasticsearch, DynamoDB, ArcGIS, PG Admin

Technologies: AWS (Lambda, S3, EC2, Sagemaker, CloudWatch), Jupyter, Docker, Bash, Linux, Git

Libraries: Flask, Express, React, Python, Selenium, NLTK, XGBoost, Word2Vec