# Michal Malyska

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## Work Experience

**Machine Learning Operations Lead**                    Toronto, Canada
*Fable Therapeutics*                    *January 2024 - Present*

- Implemented comprehensive DevOps practices including CI/CD pipelines, PRs and Code Reviews, introduced and led testing sprints, and created a unified development environment, leading to a significant improvement in code quality and velocity
- Managed and optimized cloud (AWS, Lambda, Paperspace) infrastructure supporting the work of 10 ML scientists. Improved experiment velocity with development of Step Funcitons, cost efficiency with both compute instance type optimization and model profiling and optimization

**Machine Learning Lead**                    Toronto, Canada
*Semantic Health (acquired)*                    *January 2021 - December 2022*

- Spearheaded the research and development of the company's clinical ML offerings (variety of clinical NLP + OCR + Tabular), successfully delivering multiple client deployments, leading to a US expansion, and driving a $60M valuation.
- Hired and led a team of 7 ML Scientist / Engineers: Managed their professional growth, setting objectives, conducting standups, and nurturing their leadership and technical capabilities.
- Created and deployed multiple new ML product lines based on customer calls and product insights from internal QA efforts leading to increases of 100k ARR per contract
- Introduced a novel non-intrusive data labelling and feedback scheme, increasing the granularity of labels without impacting the end user's workflow, which led to creation of new models with >50% performance gain on downstream KPIs
- Roadmapped and oversaw a new MLOps initiative to allow for better data and model monitoring

**Machine Learning Scientist**                    Toronto, Canada
*Semantic Health (acquired)*                    *June 2019 - December 2020*

- Joined as the first employee - architected and built the ML stack setting the foundation for the company's NLP capabilities
- Developed a custom multi-armed bandit model deployment scheme quadrupling ML deployment velocity to production
- Pioneered a novel architecture for generating supporting evidence for ML model predictions, implemented and deployed it leading to a 300% increase in business KPIs for the product
- Authored a series of Architecture Decision Records that still serve as the model for decision documents for the company
- Implemented a testing suite for the ML stack, including model minification allowing for pre-commit end-to-end ML testing

**Sessional Lecturer**                    Toronto, Canada
*University of Toronto*                    *2020-Present*

- Developed educational materials and delivered instruction for undergraduate and graduate courses in Statistics and ML
- Communicated sophisticated technical topics to a non-technical audience
- Modernized the CSC412 - Probablistic ML course curriculum by adding Attention, Transformers, and Diffusion models

## Education

**University of Toronto**                    2022, 2019
*MSc. Statistics, BSc. Statistics*

- Research Visitor at St Michael's Hospital, President of Statistical Sciences Union, Dean's List, Teaching Assistant

## Publications

- BioNLP - ICDBigBird: A Contextual Embedding Model for ICD Code Classification
- ACM CHIL - Active learning for medical code assignment
- EMNLP - Multiple Sclerosis Severity Classification From Clinical Text

## Skills

- **Languages**: Python, R, SQL, JavaScript
- **Tech Stack** : Git, MLFlow, Kubernetes, Docker, Dagster, Airflow, Feast, Seldon, ArgoCD, Ansible, Terraform
- **Machine Learning** : Pytorch, Tensorflow, SpaCy, Natural Language Processing, LLM, Neural Networks, Deep Learning, Statistical Learning
- **Open Source Contributions**: MedSpaCy, AllenNLP, SciSpaCy, MS-BERT