

# Michal Malyska

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## Work Experience

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### Machine Learning Lead

**Toronto, Canada**

*Semantic Health*

*January 2021 - December 2022*

- Spearheaded the research and development of the company's Machine Learning offerings, successfully delivering multiple client deployments and driving a \$60M valuation.
- Led a company-wide initiative to re-engineer development pipelines, resulting in a 40% increase in code and deployment velocities.
- Hired and lead a team of 7 ML Scientist / Engineers: Managed their professional growth, setting objectives, conducting standups, and nurturing their leadership capabilities.
- Created multiple new product lines based on customer calls and product insights from internal QA efforts leading to increases of 100k ARR per contract
- Developed a custom multi-armed bandit model deployment scheme quadrupling ML deployment velocity to production
- Led the MLOps + DevOps efforts to create ML dev and staging cloud environments allowing for end-to-end model testing for PRs which allowed the team to move away from on-prem dev environment testing.

### Machine Learning Scientist

**Toronto, Canada**

*Semantic Health*

*June 2019 - December 2020*

- Joined as first (and only technical) employee - architected and built the entire ML stack setting the foundation for the company's AI capabilities
- Introduced novel non-intrusive data labelling and feedback products allowing to gather more granular labels without impacting the end user's workflow
- 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 comprehensive 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 comprehensive educational materials and delivered engaging instruction for a range of undergraduate and graduate courses in Statistics and Machine Learning.
- Communicated sophisticated technical topics to a non-technical audience
- Modernized the course curriculum by adding Attention, Transformers, and Diffusion models

## Education

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### 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

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- 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

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- **Programming Languages:** Python, R, SQL, JavaScript
- **Libraries :** Pytorch, Tensorflow, SpaCy, Git, MLFlow, Kubernetes, Docker, Dagster, Airflow, Feast, Seldon, ArgoCD
- **Open Source Contributions:** MedSpaCy, AllenNLP, SciSpaCy, MS-BERT