Michael Morckos

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Experience

Gravitas AI   *Toronto ON, Canada*
FOUNDER   *Jan. 2024 - running*
- Gen AI for life sciences

Demand Science   *Toronto ON, Canada*
VP OF ENGINEERING, DATA   *July 2021 - Dec. 2023*
- Established a brand-new engineering office in Canada. Grew team to 20 people at peak
- Created company-wide engineering org hiring, interviewing, and training strategies. Helped expand the engineering org from 20 to 70 people worldwide (internal transitions and external hires)
- Helped set up engineering tech stacks and conventions company-wide
- Part of the team that owned the lead generation data ecosystem and migration from legacy data systems. Led the design and development of a composable data and search platform that powered revenue-generating products and applications
- Oversaw design and development of CI/CD infrastructure that supported all products and platforms across the company
- Participate in company strategy planning. Presented ideas and proposals to the executive team
- Managed data and product teams across North America, Europe, and Asia

AirborneApp (Acquired by Demand Science)   *Toronto ON, Canada*
FOUNDER   *Mar. 2020 - July 2021*
- Responsible for engineering, product, and operations functions
- Built a 7-people team of highly talented software engineers and designers
- Lead design and development of our sales engagement flagship product from the ground up
- Helped reach 5K in MRR in less than 3 months after launch
- Successful exit (acquisition) after 7 months of product launch

Carta   *Toronto ON, Canada*
SENIOR DATA ENGINEER   *Oct. 2019 - Apr. 2020*
- Part of the team leading the overhaul process for the data infrastructure
- Worked on restructuring the data platform into a modular composable design

CryptoNumerics (Acquired by Snowflake)   *Toronto ON, Canada*
CONSULTING ARCHITECT, DATA   *Aug. 2018 - Apr. 2019*
- Helped design and build prototype for flagship data anonymization product

Kik Interactive   *Toronto ON, Canada*
SENIOR SOFTWARE ENGINEER   *Oct. 2017 - Oct. 2019*
- Part of the backend team working on core services for the Kik messenger app
- Led the team in charge of designing and building backend cryptocurrency payment infrastructure for in-app purchases
- Worked with product management to design and build in-app paid features that led to a 10% increase in MAU
- Interviewed, hired, and trained several co-ops

Loblaw Digital   *Toronto ON, Canada*
SOFTWARE ENGINEER, DATA AND SEARCH   *July 2015 - Oct. 2017*
- Member of the data and search team. Led design and development of search features and infrastructure improvements for Click and Collect, Loblaw's online grocery platform
- Designed and built a data and indexing pipeline that aggregated data from multiple sources and refreshed grocery products data across all stores country-wide daily. Resulted in a 6X performance gain from the previous pipeline
- Worked closely with product management to implement various search features
- Served as scrum master. Led a team of 2 contractors
- Interviewed several candidates for various engineering teams

Vestec   *Waterloo ON, Canada*
SENIOR SOFTWARE ENGINEER, ML   *Oct. 2012 - May 2015*
- Prototyped a text-based NLP engine from scratch (data processing, training, evaluation, and tuning) and later developed it into a fully functional library
- Designed and built the Speech Lab in the Cloud (SLIC) platform for building NLU conversational solutions
- Designed and implemented several features for SLIC that attracted high customer attention
- Developed and presented custom NLU-based solutions to major customers
- Worked closely with R&D to turn prototypes into functioning libraries

Skills

Languages	Python, Golang, Java, C++, C, JavaScript
Data	PostgresSQL, MongoDB, DynamoDB, Redshift, BigQuery, Airflow, Kafka, HBase, Solr, ElasticSearch
ML	TensorFlow, Supervised Learning, Neural Networks
CI/CD	K8s, CircleCI, Jenkins, Docker
Cloud platforms	AWS, GCP, Azure
Architecture	SOA, Microservices, Data Engineering
Compliance	Google API verification, SOC 2

Research

CPAMI Lab - University of Waterloo   *Waterloo ON, Canada*

MASTER'S STUDENT AND RESEARCH ASSISTANT   *2010 - 2012*

- Designed and implemented ML algorithms and distributed system for multi-robot control in a research environment
- Collaborated with fellow graduate students on their research

Publications

- M. Morckos and F. Karray "Axon: a Middleware for Robotic Platforms in an Experimental Environment", RiTA, Denver Colorado, USA 2013.
- J. Abou Saleh, F. Karray, and M. Morckos, "A Quantitative Evaluation Criterion for Human-Robot Systems in Achievement of Collective Tasks", FUZZ-IEEE, Brisbane, Australia 2012.
- J. Abou Saleh, F. Karray, and M. Morckos, "Toward Modelling Robot Attention Demand in Human-Robot Interaction Using Finite Fuzzy State Automata", FUZZ-IEEE, Brisbane, Australia 2012.
- J. Abou Saleh, F. Karray, and M. Morckos, "A Quantitative Approach for Evaluating Human-Robot Interaction Performance", Symposium on Advances in Intelligent Systems, Waterloo, Canada 2011.
- M. Morckos and A. M. Khamis."Multi-agent Simulator For Reinforcement Learning-based Elevator Dispatching", CPAMI Newsletter January 2009 issue, University of Waterloo, Canada.

Education

University of Waterloo   *Waterloo ON, Canada*

MASc. ELECTRICAL AND COMPUTER ENGINEERING   *2010 - 2012*

- Machine Learning and Robotics
- Thesis: Axon: a Middleware for Robotic Platforms in an Experimental Environment

German University in Cairo   *Cairo, Egypt*

BSc. COMPUTER SCIENCE AND ENGINEERING   *2005 - 2009*

- Machine Learning
- Thesis: Multi-agent Simulator For Reinforcement Learning-based Elevator Dispatching

Teaching

University of Waterloo   *Waterloo ON, Canada*

TEACHING ASSISTANT   *2011 - 2012*

German University in Cairo   *Cairo, Egypt*

TEACHING ASSISTANT   *2007 - 2010*