
Alex Miłowski

Experienced Entrepreneur and Computer Scientist (Ph.D.) specializing in Data Science, Machine Learning, & Engineering

Dr. Milowski is a serial entrepreneur and computer scientist with experience in scientific applications, web and semantic technologies, graph databases, machine learning, natural language processing, data representation, and algorithms.

He holds a PhD in Informatics from the University of Edinburgh, where he researched large-scale computation over scientific data on the web. He has written about his work and research in journals, published conference papers, and given many public talks at conferences or otherwise. While a very proficient developer, he is passionate about improving the productivity and reliability of machine learning systems, improving the tools of data science, and applying his skills and knowledge to solve real-world problems. He is also an experienced engineering leader with expertise in building, mentoring, and growing teams whilst delivering high quality and reliable products.

SKILLS | Cloud Native Computing (AWS/GCP), Kubernetes, Machine Learning, Deep Learning, Data Science, NLP, GNN, Python, Go, C++, Java, Apache Spark, Graph Databases, Property Graphs / Knowledge graphs, Cypher/GQL, SQL, NoSQL, Research, Infrastructure, Workflow Automation, Microservices, Web Applications, Management, Agile Methods, Statistics, Experiences team lead and mentor

EXPERIENCE

Apr 2022 to Apr 2024 CTO - Platform Engineering, MicroByre, Inc., Berkeley, CA

MLOps, Python, Kubernetes, GCP - Hired and managed the platform engineering team that developed a data and automation platform for data science and machine learning; provided NGS sequencing of bacterial genomes, experiment generation, automation of incubation, fermentation, and chemical analysis via a Kubernetes-based microservices architecture via on-premise microk8s and GKE clusters; deployed python-based applications, service APIs, React web applications, and jupyter notebook-based; secure service infrastructure via SSO and JWT; Developed data services with property graphs and postgres to enable quick access to data and results. My role was a combination of architecture, leadership, mentoring, planning, hands-on implementation, and deployment.

Apr 2021 to Apr 2022 Data Platform Engineer, Stitch Fix, San Francisco, CA

MLOps, Python, C++, Go, Kubernetes, AWS - Senior, IC, leadership; Developing and supporting Kubernetes-based ML workflows and pipelines for ~140 data scientists; prototyped a replacement for Airflow for running workflows; build and deploy various tools for packaging, releasing, and deploying software components used in pipelines and micro services; prototyped a Kubernetes operator for service deployment management.

Dec 2019 to Apr 2021 Data Platforms Research & Kubernetes PM, Redis, Mountain View, CA

NLP, Python, Go, Kubernetes, GCP - Kubernetes (K8s) product management and planning; data on K8s for machine learning; cloud marketplaces, technical expertise on K8s & ecosystem; data management for machine learning; developed applications and demonstrate solutions for business problems with Redis technologies; applications of graph technologies, data processing workflows on K8s; applications of property graphs, NLP, machine learning (ML) / AI, and data science; technical applications of data infrastructure for ML; Implemented a Vault plugin for Redis

Mar 2017 to Aug 2019 Senior Research Scientist - Machine Learning/Data Engineering, Orange Silicon Valley, San Francisco, CA

MLOps, Deep Learning, Python, C++, Java, Kubernetes, GCP/on-prem - Leading teams and projects to define strategy for AI/ML data pipelines for a global enterprise; identify startups and develop POCs with business units; develop ML models; develop core technologies for productivity and automation of ML on Kubernetes; address strategic and technical needs for productivity of data scientists and machine learning practitioners; explore the deployment of advanced technologies layered over Kubernetes; various development with Python and Go.

2015 to 2017 Senior Staff Engineer, MarkLogic, San Carlos, CA

2014 to 2015 Data Science Postdoctoral Scholar, UC Berkeley School of Information, Berkeley, CA

2010 to 2014 Research Postgraduate, University of Edinburgh, Edinburgh, Scotland, UK

2007 to 2009 Founder, Chief Technology Officer, Appolux, Inc., San Francisco, CA

2005 to 2006 VP Engineering, Jeteye, San Francisco, CA

2004 to 2006 Adjunct, UC Berkeley School of Information, Berkeley, CA

2002 to 2004 Graduate Student, Mathematics, San Francisco State University, San Francisco, CA

2001 to 2002 Founder, Chief Technology Officer, Markup Technology Ltd., San Jose, CA / Edinburgh, Scotland, UK

prior to 2001 Various software engineering roles: early web technology, B2B XML, print production, systems engineering.

EDUCATION**Stanford University**AI Professional Certificate: NLP with Deep Learning, NLU, ML with Graphs (GNN)

The University of Edinburgh, Edinburgh, Scotland, UK

Ph.D. Informatics (Computer Science)

The Institute for Language, Cognition and Computation (ILCC)

San Francisco State University, San Francisco, CAMA Mathematics

University of Minnesota, Minneapolis, MNBS Mathematics

Bemidji State University, Bemidji, MN

AA Liberal Arts

**SELECTED
PUBLICATIONS****Subjugating Data Flow Programming**

2016-02

XML Prague

Semantic Hybridization: Mixing RDFa and JSON-LD

2015-02

XML Prague

Enabling Scientific Data on the Web; Ph.D. Dissertation

2014-11

University of Edinburgh, Informatics

Scientific Computing in the Open Web Platform

2014-02

XML Prague

**Algebraic Statistics for Computational Biology, Chap 12: The EM
Algorithm for Hidden Markov Models**

2005-08

Cambridge University Press

XML Pipelining for Mathematical Computation

2005-07

Internet Accessible Mathematical Computation - Workshop at ISSAC 2005

**Computing Irredundant Irreducible Decompositions of Large Scale
Monomial Ideals**

2004-07

ISSAC 2004

**Computing Irredundant Irreducible Decompositions and Scarf
Complexes of Large Scale Monomial Ideals; MA Thesis**

2004-03

San Francisco State University