# Alex Miłowski

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

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| **Website:** | http://www.milowski.com/ |
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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

## EXPERIENCE

**Apr 2022 to Apr 2024**   **Chief Technology Officer, MicroByre, Inc., Berkeley, CA**

Responsible for hiring and managing the platform engineering team; developed a data and automation platform for experiments, data science, and machine learning with a focus on UI/UX: NGS sequencing of bacterial genomes, experiment generation, automation of incubation, fermentation, and chemical analysis via a Kubernete-based microservices architecture via on-premise microk8s clusters and GKE. Our tools & applications deployed via a combination of python packages, service APIs, React web applications, and juptyer notebooks. Data services used property graphs and postgres databases to enable quick access to results. My role was a combination of engineering, leadership, mentoring, and planning with close collaboration with the science teams.

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

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**

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.

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

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.

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| **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** |
| **1989 to 2001** | **Various software engineering roles: early web technology, B2B XML, print production, systems engineering.** |

## EDUCATION

**Stanford University**                                               2024

**AI Professional Certificate: NLP with Deep Learning, NLU, ML with Graphs**

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**The University of Edinburgh**, Edinburgh, Scotland, UK            2010 TO 2014

**Ph.D. Informatics (Computer Science)**

The Institute for Language, Cognition and Computation (ILCC)

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**San Francisco State University**, San Francisco, CA               2001 TO 2004

**MA Mathematics**

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**University of Minnesota**, Minneapolis, MN                        1989 TO 1992

**BS Mathematics**

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**Bemidji State University**, Bemidji, MN                           1987 TO 1989

**AA Liberal Arts**

## SELECTED PUBLICATIONS

**Subjugating Data Flow Programming**                               2016-02

**XML Prague**

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**Semantic Hybridization: Mixing RDFa and JSON-LD**                 2015-02

**XML Prague**

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**Enabling Scientific Data on the Web; Ph.D. Dissertation**         2014-11

**University of Edinburgh, Informatics**

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**Scientific Computing in the Open Web Platform**                   2014-02

**XML Prague**

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**Algebraic Statistics for Computational Biology, Chap 12: The EM
Algorithm for Hidden Markov Models**                                2005-08

**Cambridge University Press**

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**XML Pipelining for Mathematical Computation**                     2005-07

**Internet Accessible Mathematical Computation - Workshop at ISSAC 2005**

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**Computing Irredundant Irreducible Decompositions of Large Scale
Monomial Ideals**                                                   2004-07

**ISSAC 2004**

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**Computing Irredundant Irreducible Decompositions and Scarf
Complexes of Large Scale Monomial Ideals; MA Thesis**              2004-03

**San Francisco State University**