

Curriculum Vitae for Thomas Peter Golding

Personal information

Address:	Vekterveien 18B 0681 Oslo	E-mail:	thomas@xal.no
		Phone:	+47 404 55 503
Born:	1985, June 2nd	Nationality:	Norwegian

Summary

Thomas is interested in bringing to life the potential of data for artificial intelligence, automation and insight purposes. He will happily engage in the steps of such a process, from analysis and machine learning to data collection and software development. Thomas has experience with analysis, data science and programming from the oil and gas and pension and insurance industries, as well as from academia. He holds a PhD in numerical astrophysics and has completed the two year leadership development program Teach First Norway. The varied experience makes Thomas a diverse problem solver with a critical and systematic approach. He is a team player and has the ability of quickly adopting to new projects and suggest novel solutions.

Technical skills

Frameworks	Tensorflow, Scikit-learn, Spark, Flask, Plotly dash
Languages	Python, SQL, R, C++, Fortran, IDL
Platforms	Google Cloud Platform, Amazon Web Services
Tools	Git, Linux, Docker, Confluence, Jira, Trello, RStudio, Latex, PowerBI, QlikView/QlikSense

Education

2012 – 2017	PhD in astrophysics, UiO. Physical processes in the solar atmosphere. The work included building mathematical and numerical representations of the physical system. The numerical model served as an experiment and a basis for analysis. Research results were published in scientific journals and presented at conferences.
2010 – 2011	Teacher qualification, UiO. Training to be a maths and science teacher in secondary and upper secondary school.
2005 – 2010	Master of science in astrophysics, UiO. Numerical modelling of the solar atmosphere. Physics, maths and computer science on bachelor level.

Courses

2019	Data engineering, big data, and machine learning on Google Cloud Platform. <i>Coursera</i>
2019	Apache Spark 2 with Scala. <i>Udemy</i>
2018	Deep learning specialization. <i>Coursera</i>
2018	Machine learning. <i>Coursera</i>

Professional experience

2019 –	Consultant, Expert analytics
2019 – 2019	Consultant, Accenture. Data science, Google Cloud Platform, big data and BI business analysis.
2016 – 2018	Analyst, Statens pensjonskasse. business intelligence, data science, data architecture, forecasting, insurance mathematics, software development and data warehousing.
2010 – 2012	Teach First Norway candidate. A two year teacher and leadership development program for graduates.

Languages

English	fluent
Norwegian	mother tongue

Some interests and hobbies

Personal	playing music, news and podcasts
Technology	machine learning, natural language processing, programming

Extended descriptions of selected projects

Activity	Production optimization with Cognite
Period	11/2019-02/2021
Role	Data scientist and developer
Staffing	2-10 developers and data scientists, 3-5 project owners, and 1-3 project managers
Volume	100%
Description	Thomas worked with production optimization for three different customers in the oil and gas industry. The main deliverables were a system for running third party physics simulations on demand from a web application, a front end solution for a gas lift optimization project, and a system for automatic classification of HSEQ-reports. The work included application development as well as data preparation and data modeling.
Tools	Python, Pywin32, Grafana, Plotly Dash, Google Cloud Platform, Cognite Data Fusion, PowerBI

Activity	Reinforcement learning internal project
Period	10/2019-11/2019
Role	Data scientist and developer
Staffing	1 data scientist
Volume	100 %
Description	Thomas implemented different reinforcement learning algorithms to solve the classic cart pole problem. The code was packaged as an application programming interface (API) and deployed as a docker container on Amazon web services (AWS).
Tools	Tensorflow, Docker, Python, Amazon Web Services

Activity	New pension premium system at Statens pensjonskasse
Period	04/2017-09/2017
Role	Developer for a premium forecast model
Staffing	3 developers and 7 analysts
Volume	50%
Description	The organization was moving a large part of their customers to a new pension premium system. The business rules for calculating pension premiums changed, and this had consequences for a large part of the organization. Thomas was responsible for developing the premium forecast system. He built a mathematical description of the model and implemented in a computer program. He designed the data flow and automated the data queries. The various components were built into a software package.
Tools	R, SQL, Jira

Activity	Building a data pipeline at Statens pensjonskasse
Period	10/2017-01/2018
Role	Developer and architect
Staffing	2 developers
Volume	50%
Description	Thomas identified a bottle neck in one of the organization's central processes. He suggested, designed, implemented and saw through the realization of a data pipeline for data from different sub processes. The solution included new software for the transform and load of business data, as well as a centralized data base for storage. The project presented a unification of data from the relevant sub processes into one standard data model. The solution resulted in higher efficiency and paved the way to further automation.
Tools	R, SQL, Jira

Activity	PhD - numerical modeling of the solar atmosphere
Period	08/2012-02/2017

Description	Thomas studied how time dependent atomic processes affect the temperature and overall state of the solar atmosphere. To do this he developed a mathematical description of the problem and translated it into a computer algorithm. He implemented the algorithm in a parallel computer code for simulating the sun. Numerical models were produced by running the code on supercomputers. The numerical models were used to analyse interaction between solar gas and light. In particular how temperature and ability to emit light changed due to the time dependent atomic process. The efforts resulted in four academic papers in the project, three of these as the first author. All four papers were published in peer-reviewed journals.
Tools	Fortran, IDL, Python, Latex
Activity	Business intelligence development at Statens pensjonskasse
Period	06/2016-12/2018
Role	Qlikview development
Staffing	3 developers
Volume	20%
Description	Statens pensjonskasse is continuously working on development and improvements of their automated reports. Thomas worked on mapping out business needs and suggested solutions in the datawarehouse. He also worked on report development in QlikView and QlikSense.
Tools	R, Qlikview, QlikSense, Jira
Activity	Business intelligence development
Period	04/2019-08/2019
Role	Business analyst
Staffing	Project manager, business analyst and 5 developers
Volume	100%
Description	Thomas acted as a bridge between business and technical development. He mapped out business needs and requirements, wrote technical specifications and performed administrative tasks related to the operation.
Tools	Qlikview, QlikSense, SAS, Jira, Python
Activity	Teach First Norway candidate
Period	07/2010-06/2012
Description	Candidates work as teachers in challenging schools in Oslo at the same time as they are following a demanding development and training program. The program revolves around the pupil's learning outcome through the candidate's progress as teachers and leaders. Thomas worked 2 years as a teacher in Gran skole at Furuset in Oslo. Here he taught maths and science from 4th-10th grade (10-16 year). Simultaneously he completed formal teacher training the first year and a leadership program at Equinor the second year.