

Curriculum Vitae for Guttorm Kvaal

Personal information

Address:	Vallefaret 18	E-mail:	guttorm@xal.no
	0663 Oslo	Phone:	40468642
Born:	24/08/1992		

Summary

I hold a Master's Degree in Computational Science and Engineering from the University of Oslo. As a consultant I have primarily been engaged in the fintech industry implementing systems performing automatic anti money laundering risk assessment of customers and creating interfaces for handling payment requests. I have experience working with cloud-based applications, managing data in databases, writing effective and transactional SQL queries, performing numerical simulations, in addition to both creating and integrating with APIs.

Technical skills

Frameworks	Google Cloud, Azure, Kubernetes, Flask, Tornado, Alembic, Numpy, Keras, Splunk
Languages	Golang, Python, HTML, SQL
Tools	Git, Docker, Linux, L ^A T _E X

Education

8/15- 6/17	M. Sc. Computational Science and Engineering at the University of Oslo Master's thesis on application of numerical methods in the development of medical technology. Subjects covering numerical methods, programming, fluid mechanics, differential equations, and linear algebra.
8/12 - 6/15	B. Sc. Physics at the University of Oslo Introduction to different fields of physics, in addition to mathematics and programming. Exchange semester fall 2014 at the University of Alberta, Canada.

Professional experience

10/17 -	Expert Analytics Consultant. Project details are listed below.
02/16 - 03/17	University of Oslo Teaching assistant in a Master's level course in numerical methods at the Department of Informatics.
02/16 - 09/17	Simula Research Laboratory Assisting the administration with writing reports and updating websites.
02/14 - 05/15	Studenthjelp Private teacher in mathematics and physics at high school level.
12/11 - 07/12	Klarna Assisting new customers with the technical aspects of the integration of Klarna's payment solution.

Languages

English	Fluent
Norwegian	Mother tongue

Personal skills

Communication	Working in teams of people with different cultural and professional backgrounds have taught me to adapt my message to the listeners and to express my self precisely. I do also have teaching experience which I believe is a good attribute in a team-based working environment.
Databases	I have worked extensively with databases and have a good understanding of the relational model. I do also have experience working with NoSQL databases.
Event sourcing	The last year I have been deeply involved in developing and implementing an event-sourcing system written in Golang and SQL. From this I have learned important key concepts and best practices (as well as potential challenges) when managing data with event-sourcing.
Mathematics	With an academical background in mathematics I have a good foundation for quickly learning and understanding methods used in fields such as data science and modelling.
Programming	I do my best to deliver well tested and documented code that is easy to read and maintain.

Some interests and hobbies

Cooking	I am well above average interested in food and wine and love to experiment flavours and techniques from around the world.
Outdoor	I love hiking and mountain biking in the summer, and alpine skiing in the winter!

Extended descriptions of selected projects

Activity	04/20-07/20 - Software developer, Simula/Smittestopp.
Role	Developer.
Staffing	5 developers.
Description	I was contracted by Simula to assist in the development of the contact tracing app Smittestopp that was being created as a response to the COVID-19 pandemic. My main responsibility was to maintain and develop the backend service. This included creating APIs for retrieval of user data, and setting up a system that enabled unit/integration tests to perform actual queries against dockerized replicas of the production database.
Tools	Python, Tornado, Alembic, Azure, Kubernetes, Docker.

Activity	04/18-12/19 - Software developer, Vipps.
Role	Developer.
Staffing	2-5 developers.
Description	I was a part of a team with the primary responsibility of creating a risk management back-office application. The application is used to organize customer data, monitor transactions, and investigate suspected cases of fraud or money laundering in order to be compliant with financial regulations. Some of my main tasks included implementing an automatic anti money laundering risk categorization system, integrating third-party APIs for collecting customer data, and automating the on-boarding process of merchant customers. I was also involved in designing and writing core components of the application such as the database model. Most of Vipps' applications run in Kubernetes, and through this project I gained experience in using this system for deploying and managing applications.
Tools	Golang, SQL, Azure, Kubernetes

Activity	02/18-04/18 - Software developer, Auka.
Role	Developer.
Staffing	Two developers.
Description	I worked with Auka, previously mCASH, in a project where we created RESTful and idempotent APIs for listing and initiating payments, in accordance with PSD2 standards. The work included integration with a payment service provider API and storing transaction data in a NoSQL database.
Tools	Python, Google App Engine, Google Cloud Datastore, Flask.

Activity	01/18-02/18 - Shift schedule optimization.
Role	Developer.
Staffing	Two developers.
Description	I participated in a project for creating a framework for generating optimal work shift schedules by analysing customer data.
Tools	Python, Numpy, Pandas, Google OR-tools.

Activity	08/16-06/17 - Master's thesis.
Role	Master student.
Staffing	My self.
Description	I created a "virtual laboratory" for performing numerical simulations of micro particles inhaled into a model of the human respiratory system, with the aim of finding the optimal size of the particles used in inhalation medicine.
Tools	Python, FEniCS, Numpy, Paraview.