Curriculum Vitae for Guttorm Kvaal

Personal information

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Born:	24/08/1992	Nationality:	Norwegian

Summary

I hold a Master's degree in Computational Science and Engineering from the University of Oslo and Simula Research Laboratory, completed summer 2017. My academic background is focused around applied mathematics, programming, and numerical simulations. Since joining Expert Analytics I have been engaged in both the Fintech industry and a project concerning shift scheduling optimization. My main programming languages are Go and Python, and I enjoy getting involved in projects that requires me to explore new fields and technologies.

I consider that the combination of possessing fundamental skills in mathematics and programming together with various practical work experiences has enabled me to contribute and solve problems in multidisciplinary projects.

Technical skills

Frameworks	Numpy, Flask, Google App Engine, Google Cloud Datastore, Gorilla/Mux, Pandas, PyTest/Unittest, Swagger, Keras (rudimentary)
Languages	Go, Python
Tools	Docker, Git, Linux, LaTeX

Education

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.
8/15- 6/17	**M. Sc. Computational Science and Engineering at the University of Oslo**

Master's thesis on numerical simulations of micro-particles inhaled into the human respiratory system, with applications to inhalation medicine. Subjects covering numerical methods, programming, fluid mechanics, differential equations, and linear algebra.

Professional experience

10/17 -	**Expert Analytics** IT consultant.
8/17 - 9/17	**Simula Research Laboratory** Assisting with creating the annual report for the Centre for Biomedical Computing.
02/16 - 03/17	**Simula Research Laboratory** Part time office assistant. Uppdating websites etc.
06/15 - 06/16	**Nokas Cash Handling** Assisting banks and stores with problems related to cash-in-transit, as well as coordinating assignments with different departments and third parties. Holiday substitute summer and christmas 2015 and 2016.
02/14 - 05/15	**Studenthjelp** Private teacher in mathematics and physics at high school level.
06/14 - 08/15	**Elkjøp** Summer job, customer service.
12/11 - 07/12	**Klarna** Assisting new customers with the technical aspects of the integration of Klarna's payment solution. Testing and verifying solutions.

Languages

English	Fluent
Norwegian	Native

Personal skills

Machine learning	Since joining Expert Analytics I have studied machine learning techniques, mainly neural networks, both on a theoretical and practical level. I have developed a neural network algorithm from scratch in Go and been looking into the machine learning framework Keras.
Problem solving	By being repeatedly challenged on solving difficult problems through work and studies, I have gained experience in how to independently approach, disect and find solutions to interdisciplinary challenges.
Programming	I am confident in tasks involving back-end and API development, and have professional experience in developing RESTful and idempotent money transfer APIs. I enjoy working with distributed systems, including parallel programming, and have experience in using Goroutines and MPI.

Teaching	I enjoy charing knowledge and have experience from working as both a private teacher and teaching assistant during my studies.

Extended descriptions of selected projects

Activity	RESTful and idempotent money transfer API, Auka.
Period	Medio February 2018 -
Role	Python developer.
Staffing	Two developers.
Volume	2 months.
Description	Creating RESTful and idempotent APIs for listing and initiating payments, in accordance with PSD2 standards. The project also involved integration with a 3rd party API.
Tools	Python, Google App Engine, Google Cloud Datastore, Flask.

Activity	Shift schedule optimization.
Period	Medio January - medio February 2018
Role	Developer.
Staffing	Two developers.
Volume	1 month.
Description	Creating a framework for generating optimal shift schedules by analysing data from historical bookings.
Tools	Python, Numpy, Pandas, Google OR-tools.

Activity	Master's thesis.
Period	January 2016 - May 2017.
Role	Master student.
Staffing	My self.
Volume	1 year.
Description	Creating a virtual laboratory for performing simulations of inhalation of micro particles inhaled into the human respiratory system.
Tools	Python, FEniCS, Numpy, Paraview.