Curriculum Vitae for Roar Emaus

Personal information

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Summary

I hold a masters degree in particle physics from the University of Oslo (2018), and a certificate of apprenticeship as an electrician from Nørve Vidergående skole (2009). I have been in different jobs with a highly varied work environments; teacher, factory worker, electrician (both for industry and domestic), salesman and conference organiser. This has given me broad experience working in both small and large scale projects and with various kinds of people, obtaining experience working in both leading and team positions.

My thesis consisted of running simulations for two different models (Quark-Gluon String Model and Hadron Resonance Gas Model) to predict experimental observables. The simulations were written in Fortran and apart from running the simulations, I wrote code to systemize and analyze the statistical data, this with Python and C++.

Through courses at the University I have programmed in Python, C/C++ and MatLab. I have experience with parallel programming through C/C++ and Python with the open source libraries OpenMP and MPI on both super computer clusters and local machines. I have also programmed differential equation solvers to calculate the orbits of our solar system and the evolution of star clusters, and spent a lot of time visualising data, mostly through Python and Matplotlib, creating interactive plots, animations and static graphs.

In my spare time I have used Linux and Python as my hobby to create for example interactive bots for Slack, a team communication software, socket programming with personal servers to communicate with Android phones. Also working with electronics to create automated and interactive systems, e.g. hydroponics system, using Arduino and Raspberry Pi.

My latest projects included creating interfaces which talks to REST API's using Python with asynchronous calling. This is being used for staff optimisation for the service industry and also open source project for data retrieval from the Frost API.

Technical skills

Frameworks	Numpy, Matplotlib, MPI, asyncio, Armadillo
Languages	Python, C/C++, MatLab, Bash
Tools	Git, Linux, Vim

Education

2015 - 2018	Master in Particle Physics from University of Oslo, Norway
2017	Exchange student at Bogolyubov Institute of Theoretical Physics, Ukraine
2011 - 2015	Bachelor in Physics from University of Oslo, Norway
2006 - 2007	Fagerlia Vidergående Skole, Norway
2002 - 2009	Certificate of apprenticeship as electrician Nørve Vidergående Skole, Norway

Professional experience

2018 -	Expert Analytics AS
2016 - 2018	Organiser for International Conference on New Frontiers in Physics (ICNFP)
2006 - 2008	Spjelkavik Elektro AS (SEAS)
2006	Telekiosken (part time)
2007	Intern at Ørsta primary school
2010 - 2011	Brødrene Sunde (part time)

Languages

English	Fluent
Norwegian	Native language

Personal skills

LaTeX	Written in LaTeX since 2011
Programming	I have mostly programmed in Python during my university years and it is my language of choice, if possible, when programming in my spare time. Through different courses I have also programmed in C/C++. Within these courses I have also implemented distributed parallelization in both languages through MPI, running both locally and on super computers. I enjoy programming and am adaptable to any programming language that is needed.

Some interests and hobbies

Electronics	Creating automated systems with Raspberry Pi and Arduino (e.g. hydroponics), costumes and accessories with embedded electronics, IoT.
Programming	Web scraping, scripts which automate daily tasks, security/privacy.