# Curriculum Vitae for Jonathan Feinberg

## Personal information


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| | 0165 Oslo | Phone: | +47 932 14 474 |
| Born: | 28.04.1984 | Nationality: | Norwegian |


## Summary


I have recently defended my doctorate at the department of mathematics at the University of Oslo. My educational background is in probability theory and statistics with heavy focus on numerical programming and practical applications. In other words, I am what one could call a data scientist. My skills include programming in Python, which I have used to write a few software packages, anything and everything related to Bayesian probabilities, and doing error analysis on large scale numerical problems.


## Technical skills

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| Frameworks | Armadillo, Matplotlib, Numpy, Pandas, SciPy, Scikit-learn, image, rvs |
| Languages | Bash, C++, MATLAB, Python, R, Vimscript, LaTeX |
| Tools | Git, Geo-statistics/GIS, Linux, Regex/Language parsing, Sql/Data warehouse |

## Education

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| 2015 | Ph.D. in Mathematics from the Department of Mathematics, University of Oslo. Title of dissertation: Some Improvements and Applications and Non-intrusive Polynomial Chaos Expansions". Supervisor: Professor Hans Petter Langtangen. |
| 2009 | M.Sc. in Modelling and Data Analysis from the Department of Mathematics, University of Oslo. Title of thesis: Threshold Definition of Early Warning Systems to Natural Hazards". Supervisor: Professor Bent Natvig. |
| 2007 | B.Sc. in Mathematics, Informatics and Technology, University of Oslo. |

## Professional experience

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| 2016 – | Consultant at Expert Analytics |
| 2014 – 2015 | 20% Teaching Position at the Department of Informatics, University of Oslo |
| 2014 – 2015 | 10% Private tutor at high school and under-graduate level at House of Math |
| 2014 – 2015 | 50% Scientific Programmer for Simula Research Laboratory |
| 2013 – 2014 | 10% Consultant at Kalkulo AS |
| 2011 – 2014 | Ph.D. student at Simula Research Laboratory |
| 2009 – 2010 | Research Assistant at Texas A&M University |
| 2009 – 2009 | Science Teacher at Smerud Medical Research |
| 2008 | 30% Assistant Teacher at Department of Mathematics, University of Oslo |
| 2007 – 2008 | 20% Student Ambassador at Public Relations and Events Office, University of Oslo |
| 2007 | 30% Data Analyst at If P&C Insurance |

## Languages

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| English | Fluent |
| Norwegian | Mother tongue |

## Personal skills

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| Communication | I am able to convey research and condensed knowledge into a presentable and explainable form. |
| Planning | I am a "Problem solver", able to see strengths and weaknesses of proposed progress plans, grounded in fact-based thought. |
| Technology | I have much enthusiasm for learning and mastering anything new within science, technology and programming. Mostly within the realm of probability theory. |

## Some interests and hobbies

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| Personal | Dancing, Traveling |
| Tech | Bayesian statistics, Machine learning, Geo-statistics, Uncertainty quantification |

## Extended descriptions of selected projects

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| Activity | Chaospy – Uncertainty Quantification Toolbox |
| Role | Researcher and algorithm developer |
| Staffing | 1 researchers |
| Description | Chaospy is an open source toolbox containing a large collection of uncertainty quantification tools. It also include some state-of-the-art tools designed to reduce the computational budget in analysis. I wrote the software as part of my Ph.D. work. In collaboration with other researchers, I also help integrate Chaospy into other practical applications involving for example blood flow simulations. |
| Tools | Python |

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|---|---|
| Activity | Matlab to C++ converter |
| Role | Software developer |
| Staffing | 2 developers |
| Description | As part of an EU sponsored project, Simula Research Laboratory and Western Geco is collaborating to speed up the code translation step from Matlab to C++ using Armadillo. The approach insoles creating a full parser that creates semi-automatic translations. I contributed as the developer of the parser, and the structure of translation. |
| Tools | Python, Armadillo, Sphinx |

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|---|---|
| Activity | Information screen for Høyer |
| Role | Backend developer |
| Staffing | 2 developers |
| Description | Høyer is a clothing department store chain in Norway. The have multiple outlets across the country. Our job was to create information screen based on the daily and monthly sales and budget numbers. My contribution was to implement a web application that retrieved and processed data to be displayed. |
| Tools | Python, Flask, Sqlite |

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| Activity | Tsunami Warning System |
| Role | Master student |
| Staffing | 20 scientists |
| Description | As part of the threat of Tsunamis in Geiranger-fjorden, advanced detection system was implemented at Hellesylt to monitor movement of the land side. My role was to develop an probabilistic learning algorithm to predict tsunami ahead of time. To do this, I implemented a Bayesian network, a form of artificial intelligence, based on a combination of available data and expert elicitation. |