

# Tautvydas Misiunas

## *Curriculum Vitae*

### Work Experience

Current, from Oct 2014

Software development engineer  
*Amazon*, Edinburgh, United Kingdom

Worked on the Dynamic Merchandising team which provides personalized content on Amazon services worldwide. Extended, a heavily human heuristics based, recommendation ranking system with machine learning models allowing flexible optimization as well as better customer experience via accurate personalization. Quickly prototyped new models and performed analysis in python while productionising best performing ideas in java. Developed smaller projects to detect adult content and to infer book language from the title. As part of massive and critical service I built tools that performed automated load tests pushing the service to the limit. This work ensured that on Cyber Monday Amazon worked without any glitches.

Nov 2012 – Aug 2013

Software developer  
*Ocado*, London, United Kingdom

Java back-end developer on MHE control team at Ocado, providing reliable real-time Java application responsible for control over sixty interconnected conveyors and cranes. Developed an optimization module which exploits idle machines to improve physical inventory distribution. The module required improved routing routine within a continuously changing warehouse. Developed an unsupervised super-graph extraction (via Markov Clustering Algorithm) based routing algorithm.

Sep 2010 - June 2011

Research assistant  
*Center for Physical Sciences and Technology*, Vilnius, Lithuania

Under the supervision of Prof. E. Tornau, I developed computational model to emulate the behavior of triangular-shaped molecules. We have extended existing phase models, such as Potts and Blume-Emery-Griffits, to support molecule's ability to settle down on the lattice. The model successfully explained two structures which were observed in experiments. Furthermore, the model predicted a new structure and defined under what circumstances it forms.

July 2012

Android games  
*Mobile app*

I co-created two Android games that are free to download. Over the years I have been keeping the applications up to date with new releases and support for new Android versions. Both applications are very successful with over a million downloads.

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### Education

2014 Master of Science  
Distinction  
Artificial Intelligence  
*The University of Edinburgh*  
Focus on ML and data analysis.

2008 – 2012 Bachelor degree  
Overall mark - 84%  
Physics  
*Vilnius University*  
Focus on math and theoretical physics.

### Projects

2015 Amazon internal mobile hackaton  
*Amazon*

2014 Msc thesis: Recommendation system for MMO games  
*The University of Edinburgh & deltaDNA*

2013 Short term movements in stock prices  
*Kaggle*

### Technical Skills

Software development	java, python, Linux, jenkins, maven, gradle, c++, bash, AWS
Machine learning	Matlab, Octane, hadoop, scikit-learn, theano, weka, Amazon EML & EMR

### Communication Skills

Conferences Amazon Machine Learning Conference – 2015

### Publications

2012 Ordered assemblies of triangular-shaped molecules with strongly interacting vertices: phase diagrams for honeycomb and zigzag structures on triangular lattice  
*The journal of physical chemistry. B*