VLADISLAV KURENKOV

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EDUCATION

Innopolis University Aug 2015 - Aug 2019
Bachelor of Science in Computer Science GPA: 3.56 (4.00 max)

RESEARCH EXPERIENCE

Mechatronics, Control, and Prototyping Lab (Innopolis University) Jul 2019 - Present
Junior Research Engineer *Innopolis, Russia*

· Organized and led an internship for 4 bachelor and 1 master students that resulted in
- A prototype of Differentiable Tensegrity simulator
- A framework for finding Deep Neural Networks based control policies using Taichi language

· Designed an algorithm for an utilization of hindsight information by Parameter Space Search algorithms based on Multiple Importance Sampling technique

· Conducted experiments on the application of Reinforcement Learning to the Tensegrity hopper control problem using Parameter Space Search algorithms and Domain Randomization

· Designed and developed a software module for modeling, simulation, and control of Tensegrity robots

Deep Learning Lab (VK) Aug 2018 - Oct 2018
Intern Research Engineer *Saint Petersburg, Russia*

· Assisted in enhancements of a technical support system, namely
- Benchmarked Deep Semantic Similarity Model against classical similarity metrics for querying FAQ pages
- Conducted multiple experiments to filter out open-domain or troll questions using deep learning based classifiers
- Designed and implemented a system to generate relevant keywords for FAQ pages using deep learning based classifiers

Compilers Lab (Samsung R&D) Jun 2017 - Aug 2017
Intern Research Engineer *Moscow, Russia*

· Benchmarked various Cross-Project Defect Prediction methods based on Decision Trees and integrated them into a private code-quality platform

PUBLICATIONS

Differentiable Tensegrity Simulator
Vladislav Kurenkov, Hany Hamed, Sergei Savin *In Preparation*

Learning Stabilizing Control Policies for a Tensegrity Hopper with Augmented Random Search
Vladislav Kurenkov, Hany Hamed, Sergei Savin *IEEE ICIEAM, 2020*

Mathematical Modelling of Tensegrity Robots with Rigid Rods
Sergei Savin, Lyudmila Vorochayeva, Vladislav Kurenkov *Computer Research and Modeling, 2020*

Task-Oriented Language Grounding for Language Input with Multiple Sub-Goals of Non-Linear Order
Vladislav Kurenkov, Bulat Maksudov, Adil Khan *EEML, 2020*

TEACHING EXPERIENCE

Behavioural and Cognitive Robotics Innopolis University
Teaching Assistant *Spring 2020*

· Advised on research projects, helped students with technical and conceptual difficulties, prepared a docker environment for running learning algorithms and visualization

ADDITIONAL EDUCATION

Oxford Machine Learning Summer School August, 2020

· The school lasted 7 days and covered the key topics in domains such as Bayesian ML, Computer Vision, NLP and reinforcement learning (as well as areas such as Causal ML, Topological ML, and Transfer Learning)

Eastern European Machine Learning Summer School July, 2020

· This is a one-week summer school around core topics regarding machine learning and artificial intelligence, particularly, this year the focus was on the fundamentals of Deep Reinforcement Learning and Graph Neural Networks.

ACHIEVEMENTS

Ranked Top 1% (19/2187) in International Data Analysis Olympiad, 2019

Ranked Top 2% (24/1567) in International Data Analysis Olympiad, 2018

VOLUNTEERING

IEEE Conference "Nonlinearity, Information and Robotics" December, 2020
Publication Chair

· Checked papers for plagiarism, designed and assembled the final proceedings (author index, table of contents, copyright page, etc.), assisted to authors with submission of final versions of their papers (copyright, proper template usage)

Winter School on Machine Learning in Robotics December, 2020
Member of an Organizing Committee

· Helped to prepare lectures and seminars schedule, invited several speakers from Samsung R&D, Yandex, Bayes Group

3rd BRICS Conference on Mathematics July, 2019
Volunteer

· Moderated paper presentation sessions (resolving technical difficulties, presenting speakers)
· Met the participants at the airport and organized transfer to the conference location

IT Nights April, 2019
Member of a Program Committee

· Review and feedback loop for the lecturers (application of StyleGAN to T-Shirt Generation; Version Control for Machine Learning Experiments at Raiffeisenbank; Content verification using Machine Learning at Lamoda)
· Moderated the Q&A sessions of the assigned lectures

SELECTED REPOSITORIES

Task-Oriented Language Grounding for Multi-Goal Instructions
github.com/vkurenkov/language-grounding-multigoal

· Implemented Multi-Task Deep Q-Learning algorithm and its extensions (DQN, DDQN, PER, Gated-Attention) for a language grounding problem

Guided Evolutionary Strategies for Locomotion Environments
github.com/vkurenkov/bcr-project

· Implemented the Open-ES and Guided-ES from scratch using PyTorch and conducted multiple experiments on MuJoCo Locomotion Tasks

Cross-Entropy Method In Haskell
github.com/vkurenkov/cem-tetris

· Implemented the Cross-Entropy Method to solve the original Tetris game in Haskell

Imitation Learning for a Real-Time Online Game
github.com/vkurenkov/haxball-chameleon

· Implemented the Behavioral Clonning based on Gradient Boosting for a real-time soccer resembling online game