

Gábor Balázs

Machine Learning Engineer | Researcher

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WORK EXPERIENCE

Freelancer

Machine Learning Engineer

Aug 2020 - Present

- State prediction of a simulated wastewater treatment plant for KavecziTerv (2021-2023). Data collection and cleaning, time-series regression using Scikit-learn, and Tensorflow.
- Developing algo-trading software for Causality Group (2020-2024).
- Self-funded scientific research in machine learning (2020-).
- Kaggle Competition Contributor (2024-).

Causality Group

Quantitative Analyst

Oct 2016 - Aug 2020

- Full stack development of an algo-trading software using SQL, Python, and Scikit-learn.
- Financial data analysis, factor modelling, time-series regression, and portfolio boosting.
- Teamwork using AWS, code reviews and Git, participating in hiring and mentoring.

Nokia Solutions and Networks

Software Engineer

Oct 2005 - Jul 2009

- 3G server-side development using C, Java, SQL, and Linux.
- Teamwork following SCRUM principles using code reviews and Subversion.

EDUCATION

University of Alberta (Edmonton, Canada)

PhD in Statistical Machine Learning

Sep 2009 - Aug 2016

- Supervised by Csaba Szepesvári and Dale Schuurmans.
- Thesis: Convex Regression: Theory, Practice, and Applications.
- Member of the RLAI lab, teaching assistant for various machine learning courses.

Eötvös Loránd University (Budapest, Hungary)

MSc in Computer Science (excellent)

Sep 2003 - Jun 2005

BSc in Computer Science (with distinction)

Sep 1999 - Jun 2003

PROJECT

Adaptively partitioning max-affine estimators for convex regression

2021 - 2022

- The design and analysis of a machine learning regression algorithm to estimate an unknown convex Lipschitz function from noisy observations. Published in AISTATS 2022.

Robot Segway Simulator

2011-2012

- Simulator for a Segway LEGO robot written in Java using LWJGL for OpenGL visualization.
- Developed for a robotics course with educational purpose to teach the basics of control, and the localization of the robot in a maze using infrared sensors and particle filtering.

SKILLS

- Python, Java, SQL, Unix, Git
- NumPy, SciPy, Pandas, Polars, Jupyter
- Scikit-learn, XGBoost, LightGBM, Tensorflow
- English (fluent), Spanish (conversational), Hungarian (native)