Zsolt Pajor-Gyulai

Mathematician, Data Scientist, ML Research Scientist/Engineer

Professional experience

Cruise LLC - Autonomous Vehicles

Staff Data Scientist

Setting technical direction and providing mentorship for a team of ~8 scientists/engineers developing ML metrics used for evaluating AV safety on road and in simulation.

- Developed 2024 goals and strategy in alignment with stakeholders providing a technical roadmap for multiple • prototyped workstreams.
- Received equivalent of Exceeds Expectations rating.

Senior Data Scientist II

Developed an end to end ML system running live on the autonomy stack for collision risk detection without reliance on the signal from a safety driver.

- Prototyped, designed, built and launched the initial product on the autonomy stack from scratch (C^{++}).
- Led a team of 4 scientists/engineers to improve the model's lift by a factor of ~10x and to build out several • analytics capabilities serving the customer.
- Received Exceeds Expectation rating.

The Voleon Group - Quantitative Finance

Member of Research Staff I & II

Developed end to end systematic trading systems powered by robust live data pipelines, cutting edge AI for alpha generation, and optimized data driven portfolio planning with state of the art risk management. Deeply involved in engineering and productization components.

- 2+ years developing and maintaining a multibillion dollar Long-Short (LS) strategy in the Asia-Pacific and European Equity space.
- 1 yr developing a US Futures strategy starting with a global macro flavor later pivoting to a LS strategy.
- Scrum master (technical lead) for 2+ years.

CIMS, New York University - Academia

Assistant Professor/Courant Instructor

Studied the long time behavior of diffusions along heteroclinic networks - dynamical systems with collections of hyperbolic saddle points and connecting heteroclinic orbits.

• Published 5 scientific articles at high prestige journals (see arxiv page) including a 140+ page magnum opus establishing the presence of polynomial time-scale metastability for such systems.

Education

2015 June	Ph.D. in Mathematics (Probability)	University of Maryland College Park
2010 June	B.Sc. and M.Sc. in Physics	Budapest University of Technology and Economics

Technical expertise

Academic Principles	Pure and Applied Mathematics, Probability Theory, Statistics, Machine Learning,
	Deep Learning
Programming Languages	Expert: Python, R, SQL
	Proficient: C++ development through delivering software on live autonomy stack.
Frameworks and libraries	(Python) Numpy, Pandas, Scikit-Learn, XGBoost, Pytorch; (R) data.table, tidyverse;
	(Cloud) Google Cloud (GCP), DBT; (C++) ROS
Collaboration skills	Project Management, Stakeholder Management, Mentorship

Nationality and Immigration Status

Hungarian National, Permanent Resident of the United States.

pgyzs1@gmail.com 240-330-3718 Montclair, NJ Website; Github; Arxiv, Google Scholar

January 2022 - September 2023

September 2018 - January 2022

September 2015 – June 2018

September 2023 - Present