

Rares Dolga

rares.dolga97@gmail.com | raresdolga.github.io/ | uk.linkedin.com/in/rares-dolga | github.com/raresdolga

Computer Science student ranked third in class and PhD candidate focused on probabilistic machine learning, specialising in efficient long sequence generation. Seeking opportunities in ML and quantitative research.

Education

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| University College London , Foundational AI CDT MPhil/PhD. Candidate | Sept 2023 – Jun 2026 |
| • NLP research for efficient long sequence learning using probabilistic machine learning techniques. | |
| University College London , MEng in Computer Science | Sept 2016 – Aug 2020 |
| • Average Degree 87%: Intro to Deep Learning (99%), Graphical Models (93%), Information Retrieval (94%), Statistical NLP (86%), Multi Agent AI (85%), Data Mining (84%) | |

Experience

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| AI Scientist Intern (Part-time) , UIPath – London, UK | June 2024 – Present |
| • Creating efficient models for long sequences | |
| AI Researcher , J.P. Morgan – London, UK | April 2022 – Sept 2023 |
| • Leading NLP research in finance, on documents and long text sequences. Financial and operations automation. | |
| • Paper under review SEIP 2023. SAM: Smart Actionable Monitoring for software applications | |
| Quantitative Developer , J.P. Morgan – London, UK | Sept 2020 – April 2022 |
| • Data Analytics team, implementing scalable time series databases and quantitative pricing models. | |
| • Built unified access to real-time and historical pricing data distributed on multiple machines. Provided different views and statistics of the raw dataset (KDB+/Q, Python). | |
| Technology Intern , J.P. Morgan – London, UK | Jun 2019 – Sept 2019 |
| • Worked as Java backend developer in the Algorithmic Trading team - software for monitoring apps. | |

Publications/Projects

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| Latte: Latent Attention for Linear Time Transformers | Apr 2024 |
| <i>Rares Dolga</i> , Lucas Maystre, Marius Cobzarencu, David Barber
doi.org/10.48550/arXiv.2402.17512 | |
| RotRNN: Modelling Long Sequences with Rotations | Jun 2024 |
| Kai Biegun*, <i>Rares Dolga*</i> , Jake Cunningham, David Barber
10.48550/arXiv.2407.07239 | |
| Tax: A fully sharded data parallel trainer in Jax | Sept 2024 |
| Rares Dolga: github.com/raresdolga/tax | |

Skills

Technologies: Python, Pytorch, Jax, Q/KDB+, Java, Linux, Git, ECDL
Languages: Fluent in English, Native Romanian speaker

Interests and Achievements

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- Awards**
- “Ambassador’s Diploma” award - for the best Romanian Student in UK during 2018-2019 academic year
 - UCL and British Computer Science award - for client consulting and applied software development
 - 2nd Place Mathematics “Caius Iacob” contest
 - 2nd Place out of 30 people, Computer Science C/C++ Regional Contest-Optimization
 - 4th Place out of 40 people, “Traian Lalescu” Intercounty Mathematics Olympiad
- Organisations and Activities**
- Microsoft Student Partner (2017-2019)