Dimitar Georgiev

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I am a PhD student in Artificial Intelligence and Machine Learning within the AI4Health CDT at Imperial College London working on deep learning and its applications to cerebral organoid phenotyping and drug discovery. My background is in Mathematics, Computer Science and Physics, and I have good research and work experience in AI and ML, data science and software.

AREAS OF EXPERTISE

Artificial Intelligence | Data Science | Software | Research

EDUCATION

PhD in Artificial Intelligence and Machine Learning
AI4Health CDT at Imperial College London

10/2021 - 10/2025

- Part of the multidisciplinary research groups of Prof. Mauricio Barahona and Prof. Molly Stevens.
- Conducting research at the intersection of AI, organoid technology, Raman spectroscopy and software.
- Establishing cerebral organoids as a platform for fundamental research, precision medicine, disease modelling and drug screening.
- Working on topics in representation learning, deep generative modelling, *in silico* drug discovery and machine learning for healthcare.
- Contributing to publications in leading conferences and journals, including first-author publications in NeurIPS and ICML.

MMath Mathematics
University of Southampton

09/2017 - 07/2021 — *First Class Honours*

- Specialised in Mathematics, Artificial Intelligence, Computer Science, Data Science and Theoretical Physics.
- Worked on projects in areas ranging from computer vision and computational biology to general relativity and quantum information theory.
- Achieved an average of 85% while also working as a Research Assistant and participating in numerous extra-curricular activities.
- Audited 7 additional modules and took part in multiple projects, competitions, seminars and societies.

WORK EXPERIENCE

Research Assistant
Univeristy of Southampton

11/2019 - 10/2021 — *Southampton, UK*

Agents, Interaction and Complexity research group

- Designed and implemented algorithms for decarbonisation and operation optimisation as a part of a collaboration between UoS and Shell.
- Developed a full-scale agent-based simulation engine for performing maritime experiments to model the dynamics of maritime shipping and quantify the effectiveness of different maritime decarbonisation measures and their impact on maritime shipping operations.
- Worked on emerging swarm behaviour, swarm autonomy and human-swarm teaming as a part of a Turing project on swarm robotics and AI and human-swarm interactions.
- Created a simulation engine to explore dynamic human-swarm teaming protocols and their applications for disaster response.
- Produced data visualisation dashboards, research figures and various front- and back-end software tools.
- Contriburted to research papers and frequently presented research results both internally and externally.

Data Science Intern
GE Aviation

06/2019 - 09/2019 — *Southampton, UK*

- Applied machine learning algorithms to create solutions for operations optimisation, anomaly detection and delay prediction.
- Explored various deep learning, statistical and optimisation models, such as RNNs and Kalman filters.
- Performed extensive data analysis of real-world aviation data to discover useful patterns and analytics.
- Helped the GE Aviation's data science team improve their processes when handling external projects.

WORK EXPERIENCE

Web Development Intern
Southampton University Students' Union

07/2018 - 08/2018 — *Southampton, UK*

- Was responsible for modernising and optimising the front- and back-end software applications of the Students' Union at the UoS.
- Helped with user experience, back-end functionality, payment security and version control.

Full-Stack Software Engineer
GameSoft

08/2016 - 09/2017 — *Sofia, Bulgaria*

- Managed end-to-end projects including web, database and desktop applications for both internal and external customers.
- Developed a web application for managing and optimising agricultural processes to improve yield quantity and reduce costs.
- Created a smart software system for parking lot management via licence plate recognition and data analytics.
- Worked on an algorithmic bot that solves Slither Link puzzles online.

OTHER EXPERIENCE

GTA for MATH97019 Methods for Data Science
Imperial College London

03/2022 - Present

- Graduate Teaching Assistant for the course Methods for Data Science offered to Y3 and Y4 students at Imperial College London.
- Responsible for marking the coursework assignments of this coursework-only module.

AWARDS

Data Science Competition Award (08/2019)
University of Southampton
- Won a data science and machine learning competition held across the School of Mathematical Sciences at the University of Southampton.
- The prize included free admission to a two-day-long course on data analysis in R given by Hadley Wickam.

4 x Dean's List Award (2018 - 2021)
University of Southampton
- The awards are made for exceptional performance as a student of the Faculty of Social, Human and Mathematical Sciences at the University of Southampton.

Mathematics Year 1 Performance Prize (07/2018)
University of Southampton
- The award is given to the student with the highest year 1 average score across the School of Mathematical Sciences at the University of Southampton.

CERTIFICATES

Fundamentals of Deep Learning for Multi-GPUs (12/2021)
Learned how to parallelise and scale big ML models. Course offered by NVIDIA.

Introduction to Quantum Computing (10/2020 - 05/2021)
A full-year course offered by IBM Quantum, Qiskit and The Coding School

Become a Data Visualization Specialist: Concepts (09/2019)
7 courses on LinkedIn Learning

Big Data Specialization (09/2018)
6 courses offered by UC San Diego on Coursera

Deep Learning Specialization (08/2018)
5 courses offered by DeepLearning.io on Coursera

Mathematics for Machine Learning Specialization (08/2018)
3 courses offered by Imperial College London on Coursera

SKILLS

Applied AI | Machine Learning | Research | Software Engineering | Data Analysis and Visualisation | Mathematics | Physics | Googling | Critical Thinking | Problem Solving | Time Management | Teamwork and Collaboration | Hardwork | Motivation

LANGUAGES

English
Full Professional Proficiency

Bulgarian
Native or Bilingual Proficiency

German
Elementary Proficiency