Daniela Ivanova

PhD Candidate

Profile

A third-year PhD student in deep learning with a strong research interest in the areas of computer vision and image processing, particularly the topics of generative modelling and image restoration. Committed to developing novel solutions that leverage deep learning to better understand and preserve cultural heritage.

Publications

Simulating Analogue Film Damage to Analyse and Improve Artefact Restoration on High-resolution Scans, Ivanova, D., Williamson, J. and Henderson, P.

In Proceedings of the 44th Annual Conference of the European Association for Computer Graphics (Eurographics 2023)

Perceptual Loss based Approach for Analogue Film Restoration, Ivanova D., Siebert J. and Williamson J.

In Proceedings of the 17th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISIGRAPP 2022)

Education

PhD in Computing Science, University of Glasgow, Glasgow

November 2020

Independently secured UKRI scholarship as part of the Computer Vision and Autonomous Systems research group at the University of Glasgow. Conducting research on the topic of deep learning for analogue film restoration (detection, segmentation and in-painting of artifacts), network interpretability, generative models and multimodal approaches to general image restoration. Preliminary work been published in top-tier graphics conferences.

BSc (Hons) in Computing Science, University of Glasgow, Glasgow

September 2016 — June 2020

Graduated with **First Class Honours**. Completed a dissertation with on the topic *"A deep learning approach to artefact correction for photographic film"* and developed a strong understanding of machine learning algorithms and neural networks architectures, as well as the ability to conduct independent research. Obtained the highest GPA of the year.

High School Diploma, Dobri Chintulov School of Mathematics and Natural Sciences, Sliven

September 2011 — June 2016

Overall grade: 6 (highest possible), with 6 in Advanced Higher Maths, Informatics, Physics.

Details

G141, School of Computing Science, 18 Lilybank Gardens
G12 8RZ, Glasgow
United Kingdom
+447708532308
2262058i@student.gla.ac.uk

Links

LinkedIn
Github

Skills

- Deep Learning
- Programming in Pytorch, JAX
- Image Processing
- Data Analytics
- Data Visualisation
- Quantitative Analysis
- Google Cloud Platform, Amazon Web Services for ML
- HuggingFace

Hobbies

Film Photography, Analogue Synthesisers, Baking, Creative Coding

Languages

- English
- Bulgarian
- German

Employment History

Teaching Assistant at University of Glasgow, Glasgow

September 2020

Teaching courses at undergraduate and posgraduate level, including:

- Deep Learning
- Computer Vision Methods and Applications
- Data Fundamentals
- Programming

Software Developer at Obashi Technology, Falkirk

June 2018 — May 2022

- Front-end developer - Vue.js
- Back-end developer - Golang

Print Specialist at Staples UK, Glasgow

August 2016 — May 2018

Awards

EPSRC Scholarship in the College of Science and Engineering

November 2020 — June 2024

Fully funded PhD Scholarship by UK Research and Innovation (UKRI)

Scottish Young Software Engineer of the Year

October 2020

For final year project, *"A deep learning approach to artefact correction for analogue film".*

Most Outstanding Undergraduate Project Award

June 2020

Awarded by UofG School of Computing Science

Most Outstanding Level 3 Honours Student

June 2019

Awarded by UofG School of Computing Science

American Foundation for Bulgaria Scholarship

September 2013 — June 2016

For excellence in academic achievement.

Extra-curricular activities

Vice President at Glasgow University Society for Women in Technology (GUSWITCH), Glasgow

August 2018 — January 2020