

CĂTĂLINA CANGEA

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King's College, Cambridge CB2 1ST, United Kingdom

PERSONAL PROFILE

First-year PhD student at the University of Cambridge, enthusiastic about creating deep learning methods for integrating medical and environmental heterogeneous data. Born on May 17, 1994 in Ploiești, România.

EDUCATION

University of Cambridge, United Kingdom

PhD in Machine Learning (October 2017–present)

MPhil in Advanced Computer Science (October 2016–July 2017)

Distinction

BA in Computer Science (October 2013–June 2016)

First Class - 3rd year

Colegiul Național "I.L.Caragiale", Ploiești, România

Computer Science & Mathematics (September 2009–May 2013)

Valedictorian, grade 10/10

RESEARCH EXPERIENCE

MPhil Research Project

December 2016–June 2017

1D–2D Cross-modality for Deep Audiovisual Classification

Cambridge, United Kingdom

- Developed multimodal deep learning architectures that allow for cross-modal dataflow between the feature extractors, extracting more interpretable features and obtaining a better representation than through unimodal learning. State-of-the-art results on *AVletters* and *CUAVE* datasets. Work presented at the ARM Research Summit 2017 and Workshop on Computational Models for Crossmodal Learning, IEEE ICDL-EPIROB 2017 (arXiv:1709.00572)

SOFTWARE ENGINEERING EXPERIENCE

Facebook

June 2016–September 2016

Software Engineer Intern

London, United Kingdom

- Worked on the LogDevice team, making client operations on a distributed RocksDB data store faster by adding new indexing mechanisms and an API required by another team. Had a positive impact on the efficiency and flexibility of read operations, while also making the system less prone to failures.

Undergraduate Dissertation Project

October 2015–May 2016

Music Genre Classification using Convolutional Neural Networks

Cambridge, United Kingdom

- Implemented a deep learning classification system in Python with CUDA kernels that was trained with spectrograms of audio samples from several genres. Obtained 99.2% accuracy for 2 genres, 80% for 4 genres and 69% for 6 genres, with only 100 samples per genre. Dissertation was given a First Class mark.

Facebook

July 2015–September 2015

Software Engineer Intern

New York, United States of America

- Worked on the iOS Product Infrastructure team. Reduced the time taken by the Facebook iOS app to load content close to the area currently being viewed on screen, by improving the existing infrastructure and prioritization system for network requests.

Google

STEP Intern

June 2014–September 2014

Zürich, Switzerland

- Added processing progress for video uploads on several YouTube pages, as the Upload page was the only one displaying this information. Developed a client implementation in JavaScript that requests processing information from the server and thumbnail rendering for processing videos on the Video Manager page.

PROFESSIONAL KNOWLEDGE AND SKILLS

Programming Languages

Python, C/C++, Objective-C, JavaScript, L^AT_EX, Java, C#, ML

Deep Learning APIs

PyTorch, Keras, CUDA

TEACHING

Computer Laboratory

Supervisor

October 2016–present

Cambridge, United Kingdom

- Final year undergraduate project—*“Deep Learning for Music Recommendation”* (2017–2018)
- Computer Science undergraduate courses: Artificial Intelligence, Databases, Discrete Mathematics, Foundations of Computer Science, Logic and Proof, Machine Learning and Real-world Data.

EXTRACURRICULAR ACTIVITIES

Gateway Academic Development Programme

October 2015–May 2016, Cambridge, UK

Computer Science student adviser

infO(1) Programming Excellence Center

September 2011–June 2013, Ploiești, România

Co-admin of the website, member

Girls Programming Camp - Facebook event

November 2011, București, România

Participant

EXTRACURRICULAR ACADEMIC ACHIEVEMENTS

International Contests

Mathematics Contest “DUEL”, Czech Republic, 2012

1st place (team), 3rd place (individual)

National Olympiads

Programming Olympiad

Mention (10th place) and Silver Medal (2011), Participation (2010)

English Language Olympiad

Special Prize for Best Writing Style (2010)

LANGUAGES

English (fluent), French (beginner), Romanian (native)

INTERESTS

Rowing

Women’s Second Boat in Darwin College (Jan–Oct 2017) and King’s College (Oct–Dec 2017)

Women’s First Boat in King’s College (Jan 2018–present)

Music

Keyboards, backing vocals in *Paper Playground*—we play in Cambridge colleges, pubs and at May Balls