DARIIA KUCHERUK

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EDUCATION

University of Toronto | Toronto, Canada Sep 2023 -
Ph.D. in Computer Science - *GPA 4.0* - Advisor: Michael Brudno Nov 2028

National University of Kyiv-Mohyla Academy | Kyiv, Ukraine Sep 2019 -
Honors Bachelor's Degree in Computer Science - Thesis co-supervised by Michael Brudno Jul 2023

RESEARCH RECORD

1. **Kucheruk D**, et al. *Optimizing Segmentation of Neonatal Brain Mri with Partially Annotated Multi-Label Data*. (Under Review for MICCAI2024)
2. **Kucheruk D**, Chevalier F. *We Don't Know and Neither Do You: Acknowledge, Visualize, and Stress the Unknown*
3. Tsepa O, **Kucheruk D**, Anderson A. *Unsupervised Detection of Bot Clusters on Twitter.*

RESEARCH & WORK EXPERIENCE

Machine Learning Researcher | University Health Network (UHN) May 2022 -
*involves collaboration with **SickKids** Hospital and **Vector** Institute* Present
- Built a new neonatal brain MRI segmentation model based on training on partially labeled data to boost the original model performance.
- Created an MRI scans preprocessing pipeline to normalize data and perform inhomogeneity bias field correction.
- Performed experiments on the proprietary and open datasets to validate the results and prepared a research paper.

June 2021 -
Software Engineer Golang| *Employer*: SoftServe May 2022
Client: ***Cisco***, Project: **Adaptive security appliance software**
- Wrote an internal Kubernetes plugin, which improved the troubleshooting process and solved duplication issues.
- Performed refactoring on a job, leading to its best-effort behavior in the upgrade scenario.
- Updated Helm templates which resulted in pure and simple logic without code duplication.

Client: NDA, Project: **Backend for Product Analytics Platform**
- Performed refactoring by removing a redundant micro-service which led to grand maintainability improvement of services and more advanced architecture.
- Refactored inner services functions resulting in easier testing and readability.
- Wrote Unit Tests and raised test coverage up to 80% on each service.

SKILLS

Programming languages: Python, Golang, Java
Frameworks & other: Tensorflow, PyTorch, Docker, Kubernetes, AWS, Git, LaTeX, PostgreSQL

RELEVANT EXPERIENCE

Teaching Assistantship| University of Toronto

Sep 2023 - Present

- Leading a tutorial session for CSC207: Software Design
- Creating assignments and mentoring students for CSC384: Introduction to Artificial Intelligence
- Mentoring students and marking exams for CSC343H1S: Introduction to Databases

A Two-Sided Recommender System for a Dating App | NDA

Apr 2022 - May 2022

Implemented several algorithms, such as User-based and Content-based collaborative filtering

A Platform for University IT Department | Kyiv-Mohyla Academy

May 2021 - Jul 2021

- Led a team of developers working on a documentation management system that automates the process of scholarship assignments, calculating students' GPAs, and collecting other statistical data
- Developed a customized PDF parser which made the process of automatic scholarship assignment available to the IT department.
- Developed and maintained service architecture (microservices), developed a PostgreSQL database from scratch, and implemented REST API.
  [Github repo](#)

VOLUNTEERING

Leading the organization of a *Women in STEM summit* **|** University of Toronto

Feb 2024 - Ongoing

- Taking initiative in creating and organizing the event
- Inviting speakers to deliver speeches to female students
- Reaching out to the DCSWomen community for raising funds for the event

Admission Triager | DCS Graduate Admissions Committee at UofT

Dec 2023

- Assessing the quality of the applicant based on their submitted transcripts, reference letters, industry experience, and statement of purpose.
- Mapping courses the applicant has taken with courses at U of T to assess whether applicants have the requisite background for programmatic success.
- Weighing reference letters based on the academic standing of the writer.
- Providing feedback to the admissions committee on issues with individual files that the committee may want to explore in more detail.

AWARDS & HONORS

Mitacs Globalink Research Internship Award ($12,000 CAD)	Jan 2023
Temerty Foundation Kma Exchange Program Scholarship ($10,000 CAD)	Sep 2022
George And Helen Vari Scholars At Risk Awards At The University Of Toronto($10,000 CAD)	Aug 2022
Undergraduate Summer Research Program At The University Of Toronto(~$7500 CAD)	May 2022