

Vasyl Chomko

Waterloo, Ontario, Canada

vchomko@uwaterloo.ca

+1 226 606 3318

<https://www.researchgate.net/profile/Vasyl-Chomko>

Dedicated researcher with extensive experience in signal processing, machine learning, and cloud computing. My work extends across both academic research and industry applications, with a focus on various video processing techniques and developing machine learning solutions for real-world applications. I am passionate about promoting research that combines theoretical knowledge with practical implementation.

EDUCATION

University of Waterloo (2023-Present)

MASc in Systems Design Engineering

Supervisors: *Prof. David Clausi and Prof. Alex Wong*

Taras Shevchenko National University of Kyiv (2019-2023)

BMATH in Computer Science

MITACS-funded research titled 'Analysis of Characteristics of Multimodal Supervised Models for Video Compression' under the co-supervision of Prof. Paul Fieguth at the University of Waterloo.

Modules included Advanced Data Analysis, Numerical Analysis, Advanced Differential Equations, Calculus, Mathematical Statistics, Control Theory, Complex Analysis, Mathematical Physics, and Functional Analysis.

PUBLICATIONS

Padalko H., **Chomko V.**, & Chumachenko D. 'A Novel Approach to Fake News Classification using LSTM-based Deep Learning Models' (2024) *Frontiers in Big Data* 6:1320800

Padalko H., **Chomko V.**, Yakovlev S., & Chumachenko D. 'Ensemble Machine Learning Approaches for Fake News Classification' (2023) *Radioelectronic and Computer Systems*.

RESEARCH SKILLS

- Data collection and analysis using Python, R, and SQL
- Statistical analysis using Python libraries (Pandas, Numpy, Scikit-learn) and advanced techniques in PyTorch, TensorFlow, and Keras
- Mathematical modeling, including Data Analysis, Linear Algebra, and Numerical Analysis
- Application of machine learning algorithms to real-world datasets
- Cloud computing and distributed systems with AWS, GCP, and Docker
- Proficient in high-performance computing with PySpark and Faiss for large-scale data analysis

CONFERENCES AND PRESENTATIONS

3rd International Workshop of IT-professionals on Artificial Intelligence 2023

'Estimation of Ukrainian Refugees Impact on COVID-19 Dynamics in Czech Republic using Prophet Model'

'Misinformation Detection in Political News using BERT Model'

6th International Conference on Informatics & Data-Driven Medicine 2023

'A Data-Driven Simulation of Ukrainian Refugee Flows Impact on COVID-19 Dynamics in the UK'

13th International Conference on Dependable Systems, Services and Technologies 2023

'COVID-19 Misinformation Detection on Weibo by Support Vector Classifier'

PROFESSIONAL ASSOCIATIONS

- Member, Signal Processing Society (SPS)
- Member, Institute of Electrical and Electronics Engineers (IEEE)

TEACHING/SUPERVISING EXPERIENCE

Teaching Assistant, University of Waterloo (Winter 2023)

- Designed and conducted 8 in-person and 1 remote tutorial session
- Developed assignments, midterm and final exams, and grading schemes
- Evaluated assignments, midterm, mini-project, and final exam performance

EMPLOYMENT

Business & Advanced Analytics Intern, WSIB, Remote (June – September 2024)

- Developed of a comprehensive tool within Microsoft's ecosystem to optimize request management
- Conducted study on Microsoft Fabric, evaluating its benefits and drawbacks for organizational adoption

DevOps Engineer, Brickred Systems, Remote (July - November 2021)

- Migrated part of Telus' infrastructure from on-premises to Google Cloud Platform (GCP)
- Rebuilt Docker images for Elasticsearch, RabbitMQ, and PostgreSQL on GCP
- Developed Infrastructure as Code (IaC) solutions using Terraform and Cloud Build
- Defined Kubernetes deployment manifests and configured Spinnaker pipeline for application deployment

DevOps Engineer Trainee, EPAM, Remote (June - October 2021)

- Deployed AWS pipelines using Jenkins, Terraform, and Ansible, accelerating software delivery
- Modeled a complex corporate network with Cisco Packet Tracer and optimized network performance

VOLUNTEERING EXPERIENCE

Head of Technical Department, University of Waterloo Ukrainian Association (2023 – Present)

- Designed and implemented a digital platform to enhance communication among association members
- Promoted association activities within the university community

Student Coordinator, Summer Program for Students at Risk, Waterloo, Canada (June - August 2023)

- Managed on-campus events for the Ukrainian student community, building cultural awareness and integration
- Acted as a bridge between the program and college administration, resolving student concerns

Peer Leader, Faculty of Computer Science and Cybernetics, Ukraine (2020 – 2022)

- Supported students with academic mentoring and peer-to-peer learning activities

REFERENCES

Dr. David A. Clausi

University of Waterloo

+1 519 888 4567 x32604

dclausi@uwaterloo.ca

Dr. Alexander Wong

University of Waterloo

+1 519 888 4567 x31299

a28wong@uwaterloo.ca

Dr. Yuhao Chen

University of Waterloo

yuhao.chen1@uwaterloo.ca