Yiping Wang

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/yiping-wang

Education

University of Victoria — Victoria, BC, Canada
Honours Bachelor of Science | Co-op — Sept. 2017 – Present

- Major in Computer Science and Minor in Electrical Engineering.
- Cumulative GPA: 8.42 / 9.00 or 90.11%
- Expected Apr. 2021

Institute for Advanced Study, Shenzhen University — Shenzhen, Guangdong, China
Bachelor of Science — Sept. 2015 – Jun. 2017

- Major in Physics and Biology.
- Cumulative GPA: 3.76 / 4.00
- Transferred to the University of Victoria.

Research Interests

Computer Vision • Medical Image Analysis • Machine Learning

My interest and enthusiasm for Computer Vision, Medical Image Analysis and Machine Learning. I explore how to use medical image data and machine learning to help doctors make decisions. I am broadly interested in machine learning for improving lesion detection and classification, anatomical structure segmentation and quantification, cancer diagnosis and therapy. Recently, I am fascinated with Computational Pathology as pathology images usually contain rich information for tissues but how could we employ computer vision and machine learning to use that information efficiently? How could we combine clinic or genomic features and deep features to improve classification and segmentation accuracy? How could we relate the arrangement of different cells with different disease? In a nutshell, I study and apply computer vision and machine learning for medical imaging.

Research Experience

Jack Bell Research Centre | BC Cancer — Vancouver, BC, Canada
Research Co-op — Sept. 2019 – Present

- Research and development of Deep Learning for the analysis of pathology images.
- Research and development of the cell-level classification and segmentation in pathology images.
- Supervised by Prof. Ali Bashashati.

Visual Computing Group | University of Victoria — Victoria, BC, Canada
Research Intern — May 2019 – Aug. 2019

- Research and development of a deep learning algorithm for automated detection and segmentation of liver tumour in pathology images using PyTorch.
- Research and development of a threshold-based algorithm for automated detection and segmentation of tumor area in PET Scan.
- Supervised by Prof. Kwang Moo Yi.

Waterloo Mathematics Undergraduate Research Conference — Waterloo, ON, Canada
Attendee — 27th Sept. 2019 – 29th Sept. 2019

Undergraduate Research Opportunities Conference — Waterloo, ON, Canada
Attendee — 27th Sept. 2018 – 30th Sept. 2018

Industry Experience

EncoreFX — Victoria, BC, Canada
Software Developer Co-op — Sept. 2018 – Dec. 2018

- Developed an online Foreign Exchange Trading and Payment platform, EncoreFX Express, using Angular and C# ASP.NET Core framework.
- Created user features and interfaces for facilitating interactions, which involves designing, developing, and testing new Angular components on the front-end, as well as building and updating new RESTful API on the back-end.
- Improved unit testing coverage using Jasmine, developed a Selenium test suite and researched in preventing Cross-Site Request Forgery and Cross-Site Scripting.

Kinsol Victoria, BC, Canada
Software Developer Co-op May 2018 – Aug. 2018

- Developed several responsive chatbot applications using Python Flask framework, JavaScript ES6, jQuery, and Bootstrap framework.
- Improved Deep Neural Networks through hyper-parameter tuning, regularization and optimization for the chatbot team.
- Implemented methods which detect and recognize different objects using OpenCV in Python for the traffic analysis team.

Projects

Project Title	Keywords	Report
End-to-End Facial Expression Modifier	Conditional GAN Style Transfer Wasserstein GAN	
Segmentation of Overlapping Cervical Cells by Joint Level Set Method	Level Set Method Segmentation Pap Smear Image Analysis	

Selected Course History

Associate with the University of Victoria

Course Name	Grade	Instructor
Deep Learning for Computer Vision	A+ (94%)	Kwang Moo Yi
Medical Image Processing	A+ (95%)	Alexandra Branzan Albu
Optimization for Machine Learning	A+ (93%)	Wu-Sheng Lu
Introduction to Artificial Intelligence	A+ (90%)	Alex Thomo
Introduction to Computer Graphics	A+ (95%)	Li Ji

Awards & Scholarships

Associate with the Institute for Advanced Study, Shenzhen University

- Outstanding Innovative Talent (First Prize, 2017)
- Excellent Student to Academic Performance (Second Prize, 2017)
- Huaqiang Entrance Scholarship (Second Prize, 2015)