

Hongrui Guo (WIP)

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🌐 StevenGuo42

EDUCATION

Nipissing University, ON, Canada

09/2017 – Present

- **BSc Honours Specialization in Computer Science, Minor in Physics** GPA 3.55/4.00
- **Certificate in Game Design and Development** 3rd Year GPA 3.73/4.00
- Specialized in Adaptive Collaboration, Machine Learning and Interdisciplinarity Expected 06/2021

WORK AND RESEARCH EXPERIENCE

Jiangsu Feiliks International Logistics Inc., Jiangsu, China

Intern Programmer

06/2018 – 08/2018

- Front-end development, SQL database and C# GUI development

Nipissing University, ON, Canada

Research Assistant

10/2018 – 04/2020

- Multi-agent simulation and agent-oriented programming in Java and AnyLogic
- E-CARGO model (focused on Group Role Assignment (GRA)) and its applications
- Extension of COSC-4896 Honours Research I project

Research Assistant

09/2020 – Present

- Distributed RBF
 - Hydrology, protein
- SEEKR, DNA
- Extension of COSC-4897 Honours Research II project

OTHER RESEARCH EXPERIENCE AND COURSE PROJECTS

COSC-3997 **Senior Practicum**

05/2019 – 08/2019

- Introduction to Machine Learning
- Signal processing and feature extraction on ECG signals
- ECG signal clustering/classification with Self-Organizing Map (SOM)
- Mangrove classification from remote sensing images

COSC-4896 **Honours Research I**

09/2019 – 12/2019

- Multi-objective optimization for GRA
- relative localization through tag detection on embedded devices
- Multi-UVA collaboration with E-CARGO model

COSC-4897 **Honours Research II**

01/2020 – 08/2020

- Multivariate time series classification
- Lower-limb movement classification from multi-channel EMG signals

- Particle swarm optimization with radial basis function for solving genomics and watershed models
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PUBLICATIONS

- H. Zhu, M. Yang and H. Guo, " Compare Collectivism with Individualism by Team Performance based on E-CARGO," in *CSCWD 2020: International Conference on Computer Supported Cooperative Work in Design, 2020, Dalian, China*. [accepted]
- SOM color mapping for psychology logo paper [acknowledgement]

OTHER PROJECTS

Personal Projects

- SOM with 3-dimensional map

Other Ongoing Research

- Dynamic qualification for GRA

SCHOLARSHIP AND AWARDS

- 2018 Carl Sanders Scholarship
- 2017 Carl Sanders Scholarship
- 2017 STEM Involvement Award

OTHER ACTIVITIES

- Lab Instructor for middle school students. Conducted weekly 3-hour electronics labs using C and Arduino (2017 - 2018)
- Team Member of FRC® Team 6162 (2016 - 2017)
- Chemistry Lab Assistant (2014 - 2016)

SKILLS

- *Programming Languages*: especially experienced in Python (4 yr.), MATLAB, Java, C/C++ (3 yr.) and JavaScript; comfortable with Shell, C#, SQL, LabView and BASIC.
- 2-year experience on *Machine Learning* and *High-Performance Computing* on SHARCNET/Compute Canada clusters
- *Tools and Library*: Keras, TensorFlow, ArcGIS, Unity, WSL, Linux, Git, SSH, SOLIDWORKS
- *Languages*: English – fluent, Chinese – native speaker, Latin – beginner
- *Other Skills*: basic lab skills, basic electronics/parts-fabrication/CAD skills, photo/video editing