

# Eugene Wang

416-953-5261 | [eugene.r.w.12@gmail.com](mailto:eugene.r.w.12@gmail.com) | [in/eugland](https://in/eugland) | [eugland.github.io](https://eugland.github.io) | [orcid/0000-0003-2219-8946](https://orcid.org/0000-0003-2219-8946)

## PROJECTS AND PUBLICATIONS

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- Y. Wang, Q. Bao "Adapting an Container Infrastructure for Autonomous Vehicle", IEEE CCWC 2020  
• Published DOI: [10.1109/CCWC47524.2020.9031129](https://doi.org/10.1109/CCWC47524.2020.9031129) [ 5 citations ]  
• Proposed using signal latency as a criterion to evaluate containers for adaption in a mixed critical system.
- Y. Wang, D. Ma "A Process in Architecting Microservices with Docker, Kubernetes, and Istio" 2019  
• arXiv preprint [arXiv:1911.02275](https://arxiv.org/abs/1911.02275) [1 citation]  
• Performed analysis on mesh networks orchestration for applications of various purposes and sizes.
- Y. Wang, A. Siong, "Candle Eggs with a Phone: An Explainable Feature-based Model" 2017 – 2021  
• [Link to Draft](#), top 3 Microsoft Image Cup, Canada, 2017; to be presented and published at IEEE GHTC 2021  
• Trained a explainable feature-based CNN model to identify features in egg development for retail farmer.

## EXPERIENCE

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**Autonomous Vehicles Platform Engineer** Aug. 2019 – Dec. 2019  
*Huawei Technologies, Canada* *Markham, ON*

- Developed a rosbag sensor data extraction pipeline and a rapid test and dev pipeline, enabling rapid agile cycles.
- Integrated Carla in a master-slave simulator; set up a k8s cluster to run concurrent simulations.
- Wrote a NVIDIA-SMI/CUDA polling service in Python that lets engineers remotely monitoring vehicles' GPU.
- Identified and documented the effects of ROS's nondeterminism on downstream software
- Coded Pytests in Jenkins pipeline to enforce software conform to predefined requirements.

**Software Developer** Aug. 2018 – Jan. 2018  
*CGI, Canada* *Richmond Hill, ON*

- Formulated  $O(n)$  inter-service list streaming algorithm replacing the original  $O(n^2)$  method.
- Sliced a Java Spring app into microservices that autoscale at 80% CPU usage across five Kubernetes nodes.
- Slashed redundancy and restricted threads count to reduce heap size of each microservice from 512MB to 256MB.
- Devised a rolling update strategy that incrementally replaces old pods with new ones, guaranteeing 0-downtime and constant space during an update.

**Mobile App. Developer** Sep. 2017 – Dec. 2017  
*Blackberry, Canada* *Waterloo, ON*

- Moved data-loading logic from the main thread to into an AsyncTask, giving a smoother UI experience.
- Amalgamated provider-specific calendar rows classes into an abstract class to ameliorate loading bottlenecks.
- Replaced repetitive HTTP requests with WebRTC to stream user media across mobile and web.

**Cloud Developer** Jan. 2017 – April. 2017  
*Royal Bank of Canada* *Toronto, ON*

- Mapped IP of incoming logs from Dynatrace against geocoordinates in an Elasticsearch pipeline to produce a Kibana graph that visualize geographic distributions of financial transactions for directors to see.

## SKILLS

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**Languages:** Java, Python, C/C++, Kotlin, HTML/CSS, Matlab

**Frameworks:** Android, Anaconda, Angular, Node.js, Flask, Pytorch, JUnit, Spring, Spring Boot

**Devops:** Kubernetes, Istio, Terraform, MongoDB, Cuda, Git, Docker, Google Cloud Platform, Azure

**Software:** ArcGIS, MapleSoft, AutoCAD, SolidWorks, IntelliJ

**Certificates:** Google Kubernetes Architect:10622413, Microsoft Java:16116022, Udacity Computer Vision:A65MRY7P

**Background:** Canadian, fluent in English, Chinese and conversant in Japanese (JLPT-N4)

## EDUCATION

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**University of Waterloo** Waterloo, ON  
*Master of Engineering, Computer Engineering* Aug. 2021  
*Bachelor of Science, Honours Physics* Sept. 2016 – Aug. 2021

## INTERESTS

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Reading stuff, RTOS, AI, Blockchain, CV, Volunteering for causes, FPS and strategy games.