

# Miguel Caringal

<https://github.com/Miguel-Caringal/>

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## EDUCATION

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- **Cameron Heights Collegiate Institute** Kitchener, ON  
*Honor Roll in all years; Subject Proficiency in Grade 12 Accounting* Sept. 2014 – June 2019
- **St. David Catholic Secondary School** Waterloo, ON  
*Honor Roll Student* Sept. 2013 – June. 2014

## WORK EXPERIENCE

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- **Xylotek Solutions Inc.** Waterloo, ON  
*Systems Engineering Intern* July 2018 - December 2018
  - TensorFlow is an open source software library for numerical computation using data flow graphs; primarily used for training deep learning models. Worked on APIs and performance for training models on Tensor Processing Units (TPU).
  - **Apache Beam** Apache Beam is a unified model for defining both batch and streaming data-parallel processing pipelines, as well as a set of language-specific SDKs for constructing pipelines and runners.
- **Kumon North America** Waterloo, ON  
*Tu* Jan 2014 - Oct 2016
  - **Notifications** Service for sending email, push and in-app notifications. Involved in features such as delivery time optimization, tracking, queuing and A/B testing. Built an internal app to run batch campaigns for marketing etc.

## VOLUNTEER EXPERIENCE

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- **Georgia Institute of Technology** Atlanta, GA  
*Research and Teaching Assistant* Jan 2012 - Dec 2013
  - **Research Assistant - Machine Learning** Research on machine learning for portfolio hedging and replication algorithms. Modeling low-risk & continuous-return strategies. Developed the python library QSTK.
  - **Teaching Assistant - Computational Investing** The online course on Coursera, had more than 100,000 students enrolled. It was featured on the 11 Alive News and the Atlanta Journal Constitution. Involved in creating assignment, exams and conducting recitation sessions. Also taught the on-campus version of the course.

## PROJECTS

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- **CHCI Student Buddy:** iOS app to help students get around Cameron Heights, including information such as student ID and schedule. Was then selected to attend Apple youth developer conference to discuss project with developers from apple - Things like target market, how to scale and how to improve were discussed.
- **GeoHam:** Android app that takes open source datasets from the city of Hamilton and Google Cloud Platform's maps API to display local attractions to users with high amounts of detail and a clean UI/UX. This project was made in less than 48 hours and won first place at UrbanHacks 2018.
- **Defeat The Beat:** A rhythm based game created at Mhacks 2018 using the myo armband in Java using Slick2D.
- **Matrix Inverse Finder:** Project made in C++ that finds the inverse of an NxN matrix using Gauss-Jordan elimination, accounting for ill-conditioned matrices.

## PROGRAMMING SKILLS

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- **Languages:** Python, C++, Swift, Java
- **Libraries/Frameworks:** Pandas