

# Matthew Yu

Computer Engineering Student

Montreal, Quebec, Canada



[/MattYu](#)



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## EDUCATION

### Bachelor's in Computer Engineering

Concordia University

Montreal, Quebec, Canada — 2016-May 2020

• GPA: **3.90/4.00** | Major GPA: **3.97/4.00**

• Top of Class in Data Structures & Algorithms, OS, OOP, Discrete Maths, Digital System Design II & Team Project Design I&II

### Bachelor's in Health Science

University of Montreal

Montreal, Quebec, Canada — 2016-2016

• Degree by credits transfer

### Unfinished: Doctor of Pharmacy

University of Montreal

Montreal, Quebec, Canada — 2011-2015

• Program change to pursue passion in tech



## PROJECTS

### EasyPlant [Java](#) [Android](#) [Firebase](#) [Google Vision](#)

Led 5-members team for 3 months. User(s) take pictures of their plants & plug humidity sensors; app recognizes the plant type and water them accordingly. 3<sup>rd</sup> place/50.

### Okapi [PHP](#) [SQL](#) [AWS](#) [Travis CI](#) [Git](#) [Static Analysis](#)

Led 8-members team for 4 months to design a Stack-Overflow-like forum with AWS EC2. 2<sup>nd</sup> place/25

### Hovercraft Competition [Python](#) [Matlab](#)

Led 3-members team for 3 months to win 1<sup>st</sup> place in design competition against 20 other teams.

### Air Traffic Controller [C++](#) [Real-Time Embedded](#)

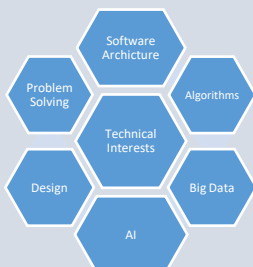
Designed an Octree collision engine, simple avoidance AI & multithread priority scheduler on embedded processor.

### 32-bits CPU [VHDL](#) [FPGA](#)

Designed, implemented and synthesized a fully functional 32-bit single-cycle MIPS instructions CPU.



## INTERESTS



## EXPERIENCE

### SOFTWARE ENGINEER INTERN



Redmond, Washington, United States — May 2019 – August 2019

- Designed, implemented and published an Azure DevOps extension using Typescript and Node.js to help migrate all Office 365 CD pipelines to Azure DevOps "Pipelines."
- Completed project 7 weeks ahead of schedule & independently drove a 2<sup>nd</sup> full-stack project in collaboration with 5 dev teams to redesign Office's Build Promotion Survey.

### SOFTWARE DEVELOPER INTERN



Montreal, Quebec, Canada — January 2019 – April 2019

Maya is a popular 3D animation software. I owned its Render Setup & Light Editor tools.

- Implemented 8 impactful features used by up to **100,000** animators and artists, representing **40%** of all new features released for Maya in Q2 2019: See "What's New in Maya 2019.2 Update": <https://help.autodesk.com/view/MAYAUL/2019/ENU/>
- Improved the Editor's runtime by factor of **x100** and RAM usage by up to **500 mb**.
- Received "**outstanding**" performance reviews and nominated for CO-OP awards.

### DATA ENGINEERING INTERN

### PRATT & WHITNEY CANADA

Greater Montreal, Quebec, Canada — September 2017-December 2017

- Architected a **~2.5M \$** Apache Spark/Python algorithm that repaired 95% of the company's CAMP engine maintenance data, making it usable for the 1<sup>st</sup> time.
- Designed and implemented 5 Spark APIs for data ETL, augmentation and backup.
- Created the company's "CAMP" data pipeline: a 100% automated Hadoop data pipeline used daily by multiple departments that leverages my above algorithms.

### PHARMACIST IN TRAINING

### PJC (INTERN X3) & PHARMAPRIX (WORK)

Montreal, Quebec, Canada — May 2014-August 2015

- Animated conferences attended by doctors & pharmacists in Montreal hospital, x3.
- Led the implementation of a maternity clinic for a local pharmacy.
- Provided counselling and prescription validation for over 50 patients/day, x1 year.



## LEADERSHIP

- 2017: Pratt & Whitney | Took a project from inception and turned it into a multimillion-dollar system in 4 months.
- 2018: Concordia University | Concurrently led 3 teams of 3, 8 and 5 peers for 3 different projects of 2-4 months durations. Won 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place in competitions of 20, 25, 50 teams.
- 2019: Autodesk | Took ownership of 2 popular Autodesk Maya tools and added 8 well-received features, while improving existing performance by factor x100.



## SKILLS

C++  
 Java  
 Python  
 C  
 Typescript  
 SQL  
 Bash  
 PHP  
 HTML, CSS  
 Assembly (MIPS, ARM Cortex, Motorola M62), VHDL

Cloud: AWS, Azure, Firebase  
 Distributed Systems: Apache Spark, MapReduce  
 Datastores: Hadoop HDFS, Hive, Firebase, MySQL  
 Frameworks: Node.js, React  
 OS: Linux, Windows, Android  
 Tools: Git, Jira, Travis CI, PHPUnit, Maven, Visual Studio, Android Stud., Eclipse



### Languages

### Technologies

### Spoken Languages