Max Pham

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Education

- **University of Toronto**
  Computer Science Specialist — Focus in Computer Systems *Sep. 2017 – May. 2021*
  - **In-progress:** Computer Organization, Introduction to Software Engineering, Programming on the Web, Software Testing and Verification, Introduction to Databases, Operating Systems, Algorithm Design, Analysis & Complexity, Principles of Programming Languages

Programming Skills

- **Languages:** Python, Java, C, Haskell, Dafny, Verilog **Technologies:** RESTful, Unix, Git, Flask, SQLite, Heroku

Relevant Projects

- **Game Center [Java]**
  Back-end Developer, Unit Tester, Gameplay Tester | Achieved Grade: A (Model Solution) *Sep 2018 - Dec 2018*
  - Utilizing Google's FireBase Cloud Storage Framework to design and implement an Authorization system to support multi-user logins. As well as, corresponding on-the-cloud saves for each user's progress. Secured user login information security in compliance to SHA-256 encryption, guaranteeing privacy between users and developers.
  - Helped design and implement 2048 game to library.

- **feed.me [Python + Java]**
  Developer + Project Manager | Placed 2nd in Sustainability Category. *March 2019*
  - Implemented RESTful service for GET, POST commands from the App to server. Incorporated MongoDB as the database framework to store and generate corresponding recipes.
  - Applied Google Vision and Food2Fork API to recognize groceries and receipts to query recipes and keep database updated.
  - **Current Development:** Integrating Google Home/Alexa. Training a more specific and focused ML model with PyTorch. OpenCV for Real-Time Recognition. iOS support.

- **unZucc.me [Python + HTML + CSS]**
  Hackathon Project @ Citizen Hacks *March 2019*
  - Utilized AGEITGEY's facial recognition API model to locate faces. Applied masking of random Gaussian noise on top with Numpy and CV2 libraries. Designed and locally deployed the app through Flask.
  - **Current Development:** Fully deploy app on Heroku. Training home-made facial recognition and GAN models. Support realtime masking.

- **uToronto API [Python's Flask + SQLite]**
  Side Project *March 2019*
  - Designed and deployed the API on Heroku. Adhering to RESTful principle for future open-source applications. Data collected from University of Toronto Calendar and converted into SQLite database. Back-end architecture supported by Flask.
  - **Current Development:** Creating front-end interfaces (website, browser extensions) for a more user friendly environment. Adding support for Programs @UofT and other schools. Systematically update database on an annual basis.

Extra-Curricular Activities

- **Autonomous Robotics Club** Magee Secondary School
  Co-founder, Back-end Developer *Sep 2016 - May 2017*
  - Originally non-operational, the club was revived and restructured from the ground up to its updated form with more than 20 recurring members participation. Negotiated and recycled broken computers from teachers to create a fleet of UNIX-based development desktops for members to learn and develop.
  - Co-lead in back-end development and vehicle design of a self-driving 3d-printed car and a quadruped spider. Instructed members in basic wiring, soldering, coding (C#) and safety training for 3d-printer.

- **Magee e-Sports Club** Magee Secondary School
  President *Sep 2016 - May 2017*
  - Organized weekly SmashBros meetups as well as viewing parties for gaming enthusiasts.
  - Initiated collaborations with Table-top club and the official support from the UBC eSports Association. Helped carried out a spring break tournament for members from high schools in the Vancouver area to participate. Most noticeably, the League of Legends Worlds 2016 Viewing Party had 30 participants, both members and non-members.