Email: andrew.gray@queensu.ca • LinkedIn • Github • Site: andrewgray.me

Andrew Gray

Extraordinarily motivated engineering student, with a rapidly developing suite of software development skills that are both self-taught and gleaned from practical work experience (web dev, mobile dev, game dev, AI and AR/VR), seeking employment in software development for a 16-month internship. Critical thinker and skilled technical communicator, with a demonstrated ability to creatively distill complex problems into manageable parts. I am a continuous learner and strive to improve my skills.

Education

Bachelor of Applied Science in Mathematics and Computer Engineering — **Sept 2017 - Present**

Queen's University — ***Kingston, ON***

- Principal's Entrance Scholarship, Dean's Scholar, GPA: 4.05/4.30
- Relevant coursework: data structures and algorithms, advanced programming in C, Object-Oriented Programming in Java, computer architecture, microprocessors and embedded systems

Skills

Programming | Java, C, C#, Python, JavaScript, TypeScript, Assembly, SQL, VHDL
Web | HTML, CSS, Node.js, AngularJS, MongoDB, PHP/MySQL, ASP.NET
Mobile | Swift, Nativescript
Numerical Processing | MATLAB, Tensorflow, Maple
Other | Git, Unix/Linux, Unity

Certificates

Machine Learning A-Z: Hands-on Python and R in Data Science | Udemy | Completed Aug 2019
The Complete Node.js Developer Course | Udemy | Completed July 2019
Learn Python and Ethical Hacking from Scratch | Udemy | Currently pursuing

Professional Experience

Technology and Innovation Intern — **May 2019 - Aug 2019**

World Vision Canada — ***Mississauga, ON***

- Led the ideation and programming of a social engagement mobile app using Nativescript, Firebase technologies.
  - Deployed app to Google Play Store.
  - Presented app to various internal teams to identify use cases. Participated in assessing potential deployment opportunities for app to both internal teams and in-market audiences.
  - Deployed app to internal testing group in September 2019.
- Created a web-app that automatically identifies content discrepancies across company web pages and documents. This app resulted in reduced work hours. My roles included:
  - Helping identify the project requirements and test app usability.
  - Independently completing the *Node.js Udemy* course in July and using my new skills to complete the project within a month.
- Proposed and developed digital signage solution for office floor-maps using frontend web technologies instead of engraved metal signs. This flexible solution saved money.
- Prototyped a VR payment solution using Unity and Oculus to engage donors and promote donations.
- Worked in an agile environment; participated in daily standups and explained software solutions to peers across many professional backgrounds.

Email: andrew.gray@queensu.ca • LinkedIn • Github • Site: andrewgray.me

Technology R&D Intern **May 2018 - Aug 2018**
World Vision Canada ***Mississauga, ON***

- Researched emerging technologies to help donor engagement and increase donations. Identified and presented use cases projects to various internal teams.
- Developed various AR and VR prototypes using the Unity game engine, including an AR portal.
- Tasked improve public engagement, our team Worked in team of interns developed a video game using Unity and hand motion sensors. Our team:
    - Optimized delivery and deployment of the game with the marketing team.
    - Deployed the game for a company event at a Cineplex Theatre.
- Took lead project ideation and software development roles in creating an AR video game that was deployed within the SnapChat app and was promoted at several public company events. Achieved 130M+ views within SnapChat.

Personal Projects

Unity Character Dialog Editor Plugin (link)
Developed a custom editor in Unity for visually creating dialog trees. Currently pending review for the Unity Asset Store.

A* Pathfinding Implementation (link)
Implemented the A* pathfinding algorithm in JavaScript, having first been introduced to Dijkstra's algorithm through my Data Structures and Algorithms university class. Using pathfinding implementation for the 2D RPG I'm currently building.

Promptu (TOHacks 2019 hackathon project) (link)
Used Node.js, Google NLP API, Google Draw API to produce a 'draw what you say' public engagement application. A public screen displays a mural of all the drawings clients send to the display through a public URL.

Lloyd's Deployment Algorithm Analysis and Implementation
Proposed, with my team, an application area for Lloyd's deployment algorithm in the efficient deployment of agents over a density functions. Optimized inputs to algorithm and produced density map from tumour images using MATLAB.

Other Experience

Computer Vision/AI Team Member **Oct 2018 - Present**
Queen's University Robotics Club ***Kingston, ON***

Team member on the Computer Vision/AI team of my University's robotics club.

- Worked in team to develop GUI with Python to label image data to then be used as training data for our ML models.
- Currently working on vision algorithms and strategy algorithms for one-on-one robot combat.
- Using Tensorflow, CNNs, genetic algorithms to train autonomous models. Will be applied to 2D simulation we developed using JavaScript.
- Developed team website: http://queensrobomaster.ca/.

Guelph Property Jobs **Dec 2015 - Aug 2017**
Started a lawn care and snow removal business in high school with friends. I developed a website and made promotional material, in addition to performing the manual labour.

For Fun

TOHacks 2019 | Ryerson University | June 2019
QHacks 2019 | Queen's University | Feb 2019
Hackference 2017 | Toronto, ON | Nov 2017
Led coding workshop at elementary school | Guelph, ON | May 2017
Intramural Basketball | Queen's University | 2019
Powerlifting neophyte | 2019